OFFICE OF THE

# Auditor General of British Columbia

## Joint Follow-up of 2001/2002: Report 1 Managing Interface Fire Risks and Firestorm 2003 Provincial Review

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The Honourable Claude Richmond
Speaker of the Legislative Assembly
Province of British Columbia
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Victoria, British Columbia
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Dear Sir:

I have the honour to transmit herewith to the Legislative Assembly of British Columbia my 2005/2006 Report 2: Joint Follow-up of 2001/2002: Report 1 Managing Interface Fire Risks and Firestorm 2003 Provincial Review.

Wayne Strelioff

Wayne Strelioff, FCA
Auditor General

Victoria, British Columbia
May 2005

copy: Mr. E. George MacMinn, Q.C.
Clerk of the Legislative Assembly

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## Auditor General's Comments

I am pleased to present in this report the results of my third follow-up review of my report *Managing Interface Fire Risk* (issued in June 2001), along with our first follow-up review of the *Firestorm 2003 Provincial Review* report.

The Firestorm 2003 Provincial Review, carried out by Mr. Gary Filmon, looked at the Province's response to the 2003 wildfires in order to assess what went well and what could have been done better. In my current report, I am providing a review of the progress reported by the Province in implementing the sixty recommendations identified in Mr. Filmon's report to highlight the effort that is being made to manage interface fire risks in British Columbia.

Of the 8 recommendations in our second follow-up report that remained only partially implemented as at October 2003, there are 6 that are similar to recommendations made in the Firestorm 2003 Provincial Review (see Appendix B for the comparison). As a result, this follow-up report includes the sixty recommendations in Mr. Filmon's report, and the two remaining recommendations from our second follow-up report, providing a comprehensive assessment of progress made to date in their implementation.

We perform follow-up reviews to provide the people of British Columbia and their elected representatives with an update on the progress made by management in implementing our recommendations and those of the Select Standing Committee on the Public Accounts. Our recommendations are designed to improve public sector performance, and are an important value-added component of our work.

As we complete a follow-up review, we provide a report to the Legislative Assembly (see Appendix C for an outline of the general follow-up process).

To carry out our follow-up reviews, we ask management of those organizations with responsibility for the matters examined to provide us with written representations describing action they have taken with respect to the recommendations. We review these representations to determine if the information reported, including an assessment of the progress made in implementing the recommendations, is presented fairly in all significant respects (see Appendix D for an outline of our review process). For this follow-up report, we concluded that the information reported by management is presented fairly.

Herein, we provide a summary of our original Managing Interface Fire Risk report, our overall conclusion to that report, and a summary of the overall status of recommendations. We provide similar information for the 2003 Firestorm Provincial Review report. This is followed by the ministry's response to our request for a combined accounting of progress.

I am pleased that there has been broad acceptance of the recommendations in both reports and that management has taken some action to implement substantially all of them. We applaud the provincial government's commitment to work with all stakeholders to carry out the considerable work that remains to implement the remaining recommendations. In the spirit of this commitment, I will carry out another follow-up review next year for the recommendations that remain partially implemented in both reports.

It is my understanding that the Ministry of Public Safety and Solicitor General plans to provide legislators with an annual report on its "all hazards approach" to preventing, preparing for, responding to and recovering from emergencies. The "all hazards approach" sets out how organizations of government at all levels should work together when there is a major provincial emergency such as an interface fire. I ask legislators to encourage the Ministry to provide such an annual report in the future. I believe that this timely and expansive information would best tell legislators and the public what they most want to know. And it would also allow me to provide them with meaningful assurance on such information.

I wish to express my appreciation to the staff and senior management of the organizations we reviewed for their cooperation in preparing the follow-up report, providing the appropriate documentation and assisting my staff throughout the review process.

*Wayne Strelioff, FCA*
*Auditor General*

*Victoria, British Columbia*
*May 2005*

## Opinion on the Status of Recommendations

Information as to the status of outstanding recommendations was provided to us by the Ministry of Public Safety and Solicitor General who coordinated the responses made by the Protection Branch in the Ministry of Forests, The Office of the Fire Commissioner in the Ministry of Community, Aboriginal and Women's Services and the Provincial Emergency Program as of October 2004.

We have reviewed the representations provided by the Ministry of Public Safety and Solicitor General in December 2004 and March 2005 regarding progress in implementing the recommendations from both our report and the Firestorm 2003 Provincial Review. The review was made in accordance with standards for assurance engagements established by the Canadian Institute of Chartered Accountants, and accordingly consisted primarily of enquiry, document review and discussion.

Based on our review, nothing has come to our attention to cause us to believe that the progress report prepared jointly by the Ministry of Forests Protection Branch, The Office of the Fire Commissioner and the Provincial Emergency Program does not present fairly, in all significant respects, the progress made in implementing the recommendations contained in our 2001 report and the Firestorm 2003 Provincial Review.

*Wayne Strelioff, FCA*
*Auditor General*

*Victoria, British Columbia*
*April 2005*

# Summary of 2001/2002 Report 1: Managing Interface Fire Risks

## Audit Purpose and Scope

The purpose of our audit was to assess the degree to which governments in British Columbia are prepared for major interface fires.

The audit focused on the following provincial government entities with responsibilities for managing interface fire risks (either directly or in support of local governments):

- Protection Branch in the Ministry of Forests;
- Office of the Fire Commissioner in the Ministry of Municipal Affairs; and
- Provincial Emergency Program in the Ministry of Attorney General.

The audit also included local governments (cities, districts, regional districts, municipalities, towns and villages) in order to assess the extent to which local and provincial government activities have been effective at managing interface fire risks.

We assessed the degree to which governments are prepared by looking for answers to the following questions:

- Have the responsibilities relating to the management of interface fire risks been clearly assigned through legislation or otherwise?
- Have adequate steps been taken to prevent interface fires and mitigate their effects if they occur?
- Have adequate steps been taken to prepare to respond to and recover from interface fires if they occur?
- Is adequate information being gathered about interface fire risks in order to assess the magnitude of the issue in the province, raise awareness, plan the appropriate provincial actions, and report on the levels of preparedness of provincial communities?

Our audit was carried out between December 1999 and July 2000. Our examination was performed in accordance with assurance standards established by the Canadian Institute of Chartered Accountants, and accordingly included such tests and other procedures we considered necessary in the circumstances. We obtained evidence from three main sources: interviews, surveys and document reviews.

Our provincial government interviews focused on staff of the Ministry of Forests, Office of the Fire Commissioner, and the Provincial Emergency Program in both head office and field locations throughout the province. As well, we interviewed local authority staff such as chief administrative officers, fire chiefs, development/planning directors, and emergency coordinators in areas of the province with significant interface fire risks.

We designed and conducted four surveys targeting local authorities including chief administrative officers, fire chiefs, development/planning directors, and emergency coordinators (Appendix A). The purpose of the surveys was to obtain the recipients' assessments of the interface fire risks their communities face and the adequacy of interface fire risk management in their immediate locations.

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During the course of the audit, we also collected and analyzed more than 200 documents containing research results and information about factors related to the management of interface fire risks.

We did not review the adequacy or appropriateness of the methods and approaches used to fight interface fires. (For details about the Office's performance auditing objectives and methodology, see Appendix D.)

## Overall Conclusion

We concluded that governments in British Columbia need to do more to be better prepared for major interface fires. A significant problem is that there is a lack of complete and reliable information about the issue-number of fires, locations, and the costs and losses associated with these events. In our opinion, the lack of information hampers efforts by provincial agencies whose role it is to raise the level of awareness of the issue among provincial and local governments. This, in turn, leads to limited attention being given to the issue by both levels of government.

Another important problem is the lack of clarity in the allocation of roles and responsibilities among provincial agencies for managing interface fire risks. Provincial emergency legislation and policies indicate that local governments are responsible for managing risks within their boundaries, while the provincial government is expected to provide material support, advice, expertise or other assistance as requested. The provincial government is also responsible for managing the risks in unorganized areas. These arrangements work reasonably well when it comes to responding to an interface fire, but response is only one element of sound risk management. The remaining elements—prevention, preparedness and recovery—must also be addressed. At present, there is a lack of clarity about which government agency (or agencies) should do the work. The presence of federal and First Nations lands also add to the lack of clarity in roles and responsibilities. Overall, the number of agencies and levels of government involved makes managing interface fire risks a relatively complex task.

Interface fire prevention requires raising awareness among local governments and their residents about the risks of these fires and encouraging them to take actions to mitigate the risks. Provincial agencies, particularly Protection Branch in the Ministry of Forests, work hard each year to help raise awareness in communities at risk. However, fire and emergency experts say the levels of awareness continue to need improvement. Protection Branch and the Office of the Fire Commissioner in the Ministry of Municipal Affairs have also produced and made available to communities information that can be used to identify and mitigate interface fire risks. But again, fire and emergency experts believe that interface fire prevention work has been insufficient in many communities with high or moderate risks, and that even when measures are put in place to help control the risks, compliance is a problem.

Preparing to respond to interface fires involves taking action ahead of time to ensure that fire and emergency experts, other emergency response agencies and residents will be ready to react effectively when a fire emergency occurs. Many aspects of response planning are done well in the

. . . continued

Continued . . .

province, and this has helped limit the number of interface fires involving major costs and property damage. For example, the province has highly trained and well-equipped wildland firefighters strategically located around the province and supported by sophisticated systems for their deployment. Many communities also have highly trained and well-equipped structural firefighters. Agreements are in place to coordinate efforts of the two groups so that effective fire response is assured and resources are added when required. Many communities also have highly-trained emergency responders. Despite all these strengths, there are still areas for improvement. A priority is the need to improve the state of local emergency planning. Not only do many jurisdictions lack emergency plans, but even those that exist often do not deal adequately with interface fires and most do not address recovery planning. Some jurisdictions periodically exercise their fire and emergency response personnel and systems to test their ability to respond to a significant interface fire, but more testing is required and more agencies need to be involved.

Local firefighters and emergency responders both see a need to improve their training and equipment to deal with interface fire situations, and both groups believe their communities are inadequately prepared to deal with major evacuations. Continued efforts are needed to find ways to reduce risks in small communities that have no structural fire services or only small volunteer groups.

# Summary of Status of Recommendations

## Managing Interface Fire Risks

Original Issue Date: June 2001

Years Followed Up: July 2002, October 2003, October 2004

| Summary of status at October 2004 | OAG | Further Follow-up Required |
|---|---|---|
| **Total Recommendations** | **38** | |
| Fully Implemented | 23 | 0 |
| Substantially Implemented | 9 | 0 |
| Partially Implemented | 1 | 1 |
| Alternative Action | 4 | 0 |
| No Action | 1 | 0 |

## Recommendations Requiring Further Follow-up

*Part V: Mitigating the Risks*

10. The Interface Fire Committee should encourage high and moderate risk communities to take practical steps to mitigate interface fire risks.

# Summary of Firestorm 2003 Provincial Review*

## Review Purpose and Process

The summer of 2003 was the worst ever for forest fires in British Columbia. Abnormally hot, dry weather resulted in over 2,500 wildfire starts over a vast area, mostly in the Interior of the province. Interface fires, which occur in places where wildland meets urban development, were at an all-time high.

The interface fires of the summer of 2003 destroyed over 334 homes and many business, and forced the evacuation of over 45,000 people. The total cost of the Firestorm is estimated at $700 million. The greatest cost of all was the loss of the lives of three pilots who died in the line of duty.

The Firestorm 2003 Provincial Review was established by the provincial government to evaluate the overall response to the emergency and make recommendations for improvement in time for the next fire season. Our findings and recommendations cross all levels of government: federal, provincial, municipal and regional, and are also aimed at individuals.

British Columbians can consider themselves fortunate that the disaster was not worse. Few communities in the province would have been immune from an interface fire, given the extreme danger ratings over the course of the summer of 2003. Without action, the danger remains.

During the public consultation phase, the Review Team received an amazing response that included over 400 presentations, submissions and communications. The public and stakeholder response covered the entire range of issues: forest management, emergency preparedness and planning, firefighting, operation of emergency centers, evacuations, resettlement, and post-emergency recovery.

Participants displayed a practical, commonsense approach to addressing the problems. This demonstrated that many people were thinking through the issues and the need to be better prepared for interface wildfires.

## Final Thoughts

The Review Team has listened to and learned a great deal about the fire-related challenges that face British Columbians, particularly those in the interface zones. On many of the matters addressed, both at our public hearings and in the written briefs we received, there was no clear consensus. This was especially true regarding individual assessments of how operations were carried out during the stress of the 2003 emergency.

On some issues, however, there was strong and wide spread consensus. Almost everyone believed that many aspects of planning, preparation, response and recovery could be improved.

Another area of clear consensus was that concentration of resources and effort on issues that anticipate, prevent and prepare for disasters is a better investment than on expenditures made in coping with disasters. Consequently, we have made many recommendations to invest in preparedness, education and training.

*This text is reproduced from the Firestorm 2003 Provincial Review Executive Summary and Final Thoughts sections.

There was also a firm recognition that many subdivisions in the interface were not designed to mitigate wildfire risks, nor were the dwellings constructed to reduce wildfire hazards. We believe that local governments and individual homeowners have recognized the risks and are now prepared to follow the best information available to correct for past inaction. We believe they will accept strong direction and leadership on this issue.

The topic of fuel load reduction through prescribed burns is perhaps the best example of a strong consensus on what formerly had been a very controversial and divisive debate. Simply put, almost everyone who gave advice to the Review Team agreed that it was better to accept short-term inconvenience and irritation in favour of long-term reduction in hazard and cost.

We believe the governments have a once-in-a-lifetime opportunity to implement risk reduction policies and legislation while the devastation of Firestorm 2003 is fresh in the public's mind and the costs and consequences of various choices are well understood.

Although the winter of 2004 has brought some precipitation, Interior snow packs are still below normal, and many scientific bodies are predicting a trend towards hotter, drier conditions. The hot, dry conditions that British Columbia endured last summer and in recent years also appeared in California, Europe and elsewhere.

In Europe, for instance, where tens of thousands of deaths in the summer of 2003 were attributed to a searing hear wave, the Swiss Federal Institute of Technology, ETH Zurich, is predicting a growing trend to more hot weather. According to Dr. Christoph Schar, "our simulations show that, roughly speaking every second European summer is likely to be as warm, if not warmer, than the summer of 2003."

From a Canadian perspective, moisture cycles usually follow a seven to ten year pattern and we appear to be only a few years into a dry cycle.

Whether the reason is global climate change, or normal weather cycles, it would be prudent for British Columbians to prepare for the probability of more hot, dry summer weather.

The time to prepare is now. The responsibility for action is shared among all levels of government and private individuals. We believe British Columbians are up to the challenge.

# Summary of Status of Recommendations

## Firestorm 2003 Provincial Review

Original Issue Date: February 2004

Year Followed Up: October 2004

| Summary of status at October 2004 | | Further Follow-up Required |
|---|---|---|
| **Total Recommendations** | **74** | |
| Fully Implemented | 17 | 0 |
| Substantially Implemented | 31 | 0 |
| Partially Implemented | 13 | 13 |
| Alternative Action | 13 | 0 |
| No Action | 0 | 0 |

## Recommendations Requiring Further Follow-up

*Province to Lead Strategic Plan Development:*

1. The provincial government should lead the development of a strategic plan in cooperation with local governments to improve fire prevention in the interface through fuel management. The plan should:
    - Identify and assign fuel management priorities based on threats to human life, property and resource values.
    - Be cost shared with local governments.
    - Give priority for funding, fire management planning, fuels mitigation, and protection to these areas.

*Undertake Fuel Treatment Pilot Projects:*

2. The provincial government should undertake a series of fuel treatment pilot projects in cooperation with municipal and regional governments in locations of high interface fire risk to demonstrate and prove the social, economic, and ecological costs and benefits of fuel treatments.

3. The provincial government should commit new funding for it for its share of the fuel management program.

*Assess Land Use Plans:*

7. The province should review and amend Land Use Plans and LRMPs to incorporate fire management considerations. Fire experts must be available to influence and participate in land management planning.

*Use Prescribed Burning:*

10. The province should establish strictly controlled conditions for using prescribed burning as a fuel management tool.

*Deal With Slash:*

11. The province should require all slash within or adjacent to a wild land urban interface to be removed, treated or burned on site to mitigate the surface fuel hazard.

*Consider Amending the Annual Allowable Cut:*

12. The Ministry of Forests should consider amending Annual Allowable Cut (AAC) determinations in fire-prone ecosystems to encourage hazard reduction treatments by tenure holders in marginal and uneconomic tree stand 1areas within the wild land urban interface.

*Retain The Knowledge Base:*

15. The province and the forest industry must pay particular attention to retaining the existing knowledge about fuel reduction practices and continue to develop and expand that knowledge base.

*Maximize British Columbia's Firefighting Expertise:*

20. The province should establish a working group of officials from a broad spectrum of interface fire responder agencies, fire training agencies, fire prevention agencies, persons with firefighting expertise, and other appropriate members to examine best practices relating to interface fires and recommend changes to the government.

*Achieve Emergency Radio Inter-Operability:*

30. The British Columbia government should develop and implement a provincial strategy for emergency communications technology focused on moving over time to total inter-operability across agencies throughout the province.

*Access Local Firefighting Expertise:*

47. Pre-emergency preparedness models should be consistently implemented province wide by the Forest Protection Branch.

## Response from:

Provincial Emergency Program - Ministry of Public Safety and Solicitor General
The Protection Branch - Ministry of Forests,
and Office of the Fire Commissioner - Ministry of Community, Aboriginal and Women's Services

## Overview:

In the summer of 2003, record setting drought conditions combined with high winds and high temperatures to create some of the most volatile fire behaviour British Columbia and Canada has ever seen. The resulting series of devastating wild fires constituted one of the largest and most expensive natural disasters in BC's history.

The response brought together private individuals and groups, local government, First Nations, provincial and federal governments, volunteers, non-government organizations, and the private sector, all working to achieve common goals and objectives. The cooperation among these groups was unprecedented. The success of this cooperation resulted in the evacuation of fifty thousand people and a further fifty thousand more placed on alert with no civilian loss of life.

After any event of this scale though, there are always "lessons learned." These lessons are segmented into "what worked well" and "what could be improved upon."

On October 4, 2003 Premier Gordon Campbell appointed Gary Filmon to conduct an independent, comprehensive review of the Province's response to the 2003 wildfires. The purpose of the review was to determine what could be learned and to make recommendations for the future by looking at a full range of issues relevant to prevention, planning, response and recovery.

The report, *British Columbia 2003 Firestorm Provincial Review*, was released in the February of 2004. The report accurately gives credit for the efforts of those involved and generally concludes the response to fire season 2003 was very well done. There were, however, sixty recommendations for improvement. Shortly after the release of the report, the provincial government accepted and took action on all of these recommendations.

The attached report provides a status report on initiatives taken in response to the Filmon Review recommendations, including two additional recommendations carried over from a previous review done by the Auditor General's office.

The recommendations vary tremendously in scope, scale, timelines, and amount of resources required for implementation. As well, the lead agency or individual responsible for satisfying each recommendation needed to be identified.

The provincial government has shown tremendous leadership and commitment with respect to the recommendations it has direct authority over and has, wherever possible, provided examples of best practises as well as advice and assistance to others dealing with those recommendations that fall outside provincial government jurisdiction.

A significant number of short and mid-term recommendations were completed prior to fire season 2004. The resulting successes were clearly evident during operations, and positively detailed in post operational reviews conducted by the various stakeholders.

These included:

- The distribution of FireSmart homeowner manuals to approximately 570,000 British Columbia households. Every community, regional district and fire department received a comprehensive FireSmart "Protecting Your Community" manual.
- The release of the "British Columbia Crisis Communications Strategy for Major Provincial Emergencies" by Cabinet. This strategy outlines the Province's crisis communications policies, roles and responsibilities. It ensures that accurate, clear and timely public information affecting the safety, health and property of British Columbians is delivered during major emergencies. This strategy was used very successfully prior to and during fire season 2004.
- The addition of five new Ministry of Forest (MoF) unit crews, totalling 100 firefighters of which 40 are First Nations firefighters. Two tankers were also added to the air fleet.
- The provision of one million dollars in funding, as well as expert technical advice and assistance from both the Office of the Fire Commissioner (OFC) and MoF to the Union of British Columbia Municipalities (UBCM) for the development and implementation of sprinkler kits. The deployment of these three kits (which provide a "best practice" for communities) to interface fires in Lonesome Lake, Whitecap Creek and Boston

Bar, prevented an estimated one million dollars in damage to local infrastructure.

- The provision by OFC of state of the art real-time mapping to key stakeholders such as emergency and reception centres, responders at site level, the media and the public to supplement and illustrate evacuation notices, alerts, orders and all clears. Ministry of Sustainable Resource Management (MSRM) staff also provided invaluable expertise and products, based on lessons learned from the previous fire season.
- The establishment of a multi-agency group consisting of OFC, the Provincial Emergency Program (PEP), Forest Protection Branch (FPB) UBCM and the BC Fire Chief's Association to set reimbursement rates.
- The passing of legislation May 20, 2004, requiring Regional Districts to establish and maintain emergency programs and to develop emergency plans.
- The provision of one million dollars in provincial funding through UBCM to assist regional districts and local governments in fulfilling their emergency management roles and responsibilities.
- The provision of one million dollars in provincial funding through UBCM to assist regional districts and local governments in development of Community Wildfire Protection Plans. The creation of several new PEP positions to further enhance provincial support to communities for emergency management preparedness, planning, response and recovery.

The Filmon Review also focused on prevention and mitigation aspects, including fuel load management and the creation of "defendable space." While prevention and mitigation best practises are detailed in such educational material as FireSmart and, while MoF is also hiring expert staff to work with other agencies and local governments on strategic fuel management and protection programs, the long-term engagement and involvement of local governments and individual homeowners in these areas will be critical success factors.

The province of BC is a national leader in emergency management and wildfire control with many practises viewed both nationally and internationally as the best practises to follow. The British Columbia Emergency Management System (BCERMS), the establishment of permanent regional response centres to support local governments and First Nations, and the use of the integrated response structure to ensure

agencies support each other efficiently and effectively are elements that together result in a strong emergency management structure. Emergency management in British Columbia is all-hazards based and many of the same principles and practises have been used very effectively for fire season 2003 and 2004, fall flooding 2003, and the avian influenza outbreak in the spring of 2004.

*Summary:*

The majority of the recommendations are either fully implemented, substantially implemented or alternative action has been taken. Although there still remains some considerable work ahead, the provincial government is committed to working with all stakeholders to ensure the recommendations are implemented.

# Summary of Status of Implementation by Recommendation
# Combined Reports
# As at October 15, 2004

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| Part I: FOREST MANAGEMENT | | | | | |
| **Province to Lead Strategic Plan Development:** | | | | | |
| 1. The provincial government should lead the development of a strategic plan in cooperation with local governments to improve fire prevention in the interface through fuel management. *The plan should:* | | | | | |
| a) Focus on identification of those areas of the province where communities, infrastructure, and watersheds have the greatest potential to be impacted by large-scale fires. | | ✓ | | | |
| b) Identify and assign fuel management priorities based on threats to human life, property and resource values. | | | ✓ | | |
| c) Require a community protection plan in those communities with a high probability and consequence of fire in the interface zone. | | | | ✓ | |
| d) Be cost shared with local governments. | | | ✓ | | |
| e) Give priority for funding, fire management planning, fuels mitigation, and protection to these areas. | | | ✓ | | |
| **Undertake Fuel Treatment Pilot Projects:** | | | | | |
| 2. The provincial government should undertake a series of fuel treatment pilot projects in cooperation with municipal and regional governments in locations of high interface fire risk to demonstrate and prove the social, economic, and ecological costs and benefits of fuel treatments. | | | ✓ | | |
| 3. The provincial government should commit new funding for its share of the fuel management program. | | | ✓ | | |
| **Adopt Fire Smart:** | | | | | |
| 4. Municipalities within fire prone areas should formally adopt the Fire Smart (Partners in Protection 2003) standard for community protection both for private and public property. | | ✓ | | | |
| 5. At a minimum, this standard should be applied to all new subdivision developments. | | | | ✓ | |
| **Look at Insurance Rates:** | | | | | |
| 6. The insurance industry should encourage and reward, through its rate-setting process, dwellings and communities built to acceptable standards. | | | | ✓ | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Assess Land Use Plans:**<br>7. The province should review and amend Land Use Plans and LRMPs to incorporate fire management considerations. Fire experts must be available to influence and participate in land management planning. | | | ✓ | | |
| **Reduce Fuel Build-up in Parks:**<br>8. The province should allow selective tree harvesting in provincial parks to reduce fuel build-up. | ✓ | | | | |
| **Ministry of Forests Responsible for Fire Suppression in Parks:**<br>9. The Ministry of Forests, Forest Protection Branch should take the lead in suppressing fires in provincial parks, as proposed under the new Wildfire Act. | | ✓ | | | |
| **Use Prescribed Burning:**<br>10. The province should establish strictly controlled conditions for using prescribed burning as a fuel management tool. | | | ✓ | | |
| **Deal With Slash:**<br>11. The province should require all slash within or adjacent to a wildland urban interface to be removed, treated or burned on site to mitigate the surface fuel hazard. | | | ✓ | | |
| **Consider Amending the Annual Allowable Cut:**<br>12. The Ministry of Forests should consider amending Annual Allowable Cut determinations in fire-prone ecosystems to encourage hazard reduction treatments by tenure holders in marginal and uneconomic tree stand areas within the wildland urban interface. | | | ✓ | | |
| **Look at Alternatives to Stumpage:**<br>13. The province should investigate alternatives to stumpage as an incentive to encourage the harvest of high-risk low value fuel types. | | ✓ | | | |
| **More Research and Development:**<br>14. Industry should undertake research into the use of small diameter trees in non-traditional forest products markets such as energy and bio-fuel. | | | | ✓ | |
| **Retain The Knowledge Base:**<br>15. The province and the forest industry must pay particular attention to retaining the existing knowledge about fuel reduction practices and continue to develop and expand that knowledge base. | | | ✓ | | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Share Information:** | | | | | |
| 16. Wherever possible, British Columbia should focus on collaboration with North American and other jurisdictions to share knowledge and pursue research. | ✓ | | | | |
| Part II: EMERGENCY MANAGEMENT | | | | | |
| **Require Wildfire-Proofing Across the Province:** | | | | | |
| 17. The British Columbia government should require municipal and regional governments to implement building codes and land use requirements that have proven useful elsewhere in limiting the impact of interface fires. | | | | ✓ | |
| **Make Local Emergency Plans Mandatory:** | | | | | |
| 18. As is the case for municipal governments, regional districts should be required through legislation to provide local emergency plans developed to a provincial standard and maintained to a current status. | | | | | |
| a) Local plans should be based on the British Columbia Emergency Response Management System (BCERMS). | | ✓ | | | |
| b) Plans should be in a standardized format/template consistent across the province, and be made consistent with provincial plans. | | ✓ | | | |
| c) Plans should be developed from an "all hazards" perspective. | ✓ | | | | |
| d) Plans must be practical, comprehensive and updated annually. | | ✓ | | | |
| e) Plans must include mandatory mutual aid agreements among municipal and regional districts. | | | | ✓ | |
| f) Plans must incorporate clear obligations and personal responsibilities of residents living in interface fire hazard areas. | | ✓ | | | |
| g) Ideally, plans should include First Nations involvement. | | ✓ | | | |
| h) Plans must have a communications element that incorporates local media into the disaster response effort. | ✓ | | | | |
| **Maximize British Columbia's Firefighting Expertise:** | | | | | |
| 19. Provincial and local governments should ensure both forest firefighters and structural firefighters are cross trained in each other's area of competence. | | ✓ | | | |
| 20. The province should establish a working group of officials from a broad spectrum of interface fire responder agencies, fire training agencies, fire prevention agencies, persons with firefighting expertise, and other appropriate members to examine best practices relating to interface fires and recommend changes to government. | | | ✓ | | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Adopt Automatic Aid:** | | | | | |
| 21. The province should adopt the principle of automatic aid to ensure that emergency services can be delivered in all areas of the province under the mandatory emergency plans. | | | | ✓ | |
| Part III: COMMAND AND CONTROL | | | | | |
| **Standardize BCERMS and ICS Use and Training:** | | | | | |
| 22. To gain the full value of BCERMS and the Incident Command System (ICS) it must be universally adopted by all provincial and local government agencies. | | ✓ | | | |
| 23. Training course material, delivery and examination for ICS should be standardized across organizations. | | ✓ | | | |
| 24. The province should consider the establishment of a single, province-wide focus for training within British Columbia to achieve: | | | | | |
| a) Implementation of consistent standards and policies for the Office of the Fire Commissioner, Ministry of Forests, and the Provincial Emergency Program to allow integration from within the province's emergency response structure. | | ✓ | | | |
| b) Development and continual upgrading of a common curriculum for all ICS training in British Columbia. | | ✓ | | | |
| **Continuing Education** | | | | | |
| 25. Maintaining ICS accreditation over time should be dependent on a system of continuing education credits and participation in regularly-scheduled, integrated simulations using ICS. | | | | ✓ | |
| Part IV: COMMUNICATIONS | | | | | |
| **Develop a Crisis Communications Strategy** | | | | | |
| 26. The province should immediately undertake the development of a provincial communications strategy and protocol for major emergency events defining the roles and responsibilities of those involved. *The strategy should:* | | | | | |
| a) Include the participation of all key stakeholders including the media. | ✓ | | | | |
| b) Establish clear principles and protocols about the release of information. | ✓ | | | | |
| c) Identify how the media and the internet can be used in times of emergency as a technical resource and to disseminate information to the public. | ✓ | | | | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Establish Emergency Communications SWAT Team** | | | | | |
| 27. To coordinate on-site communications during times of emergency, the province should establish a media communications SWAT team with members from municipal, regional, provincial and federal governments and including other major stakeholders as appropriate. | ✓ | | | | |
| 28. The members of this team would be trained in crisis communications and would serve to facilitate, not stem, the flow of information. | ✓ | | | | |
| **Cooperate on Training:** | | | | | |
| 29. All jurisdictions should consider intensifying inter-agency training efforts, including the use of large-scale interface wildfire simulations, to improve communications. | | ✓ | | | |
| **Achieve Emergency Radio Inter-Operability:** | | | | | |
| 30. The British Columbia government should develop and implement a provincial strategy for emergency communications technology focused on moving over time to total inter-operability across agencies throughout the province. | | | ✓ | | |
| 31. Initial activities should include developing a provincial inventory for all fire, police, ambulance, forestry radios and frequencies to ensure that where radio systems are compatible, they can be programmed with common frequencies or talk groups. | | | | ✓ | |
| 32. Whenever portable and mobile radios for emergency services are replaced to accommodate narrow banding, they should be replaced with new radios that are inter-operable across agencies. | | | | ✓ | |
| **Include Amateur Radio Operators in Emergency Response:** | | | | | |
| 33. All Emergency Operation Centres should include a provision for amateur radio operators, including power and antenna space, in case they are needed. | | ✓ | | | |
| 34. Communications systems should be regularly exercised to ensure that equipment, policies and procedures are functional. | ✓ | | | | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Educate the Public about Interface Wildfires:** | | | | | |
| 35. A cooperative public education program should be undertaken, building on material already available in various British Columbia government departments and agencies, as well as from external sources. | ✓ | | | | |
| 36. This education campaign must inform interface residents about the risks and their responsibilities in planning and preparing for and responding to interface fires. | | ✓ | | | |
| 37. The campaign should be delivered to school children as well as adults. | | ✓ | | | |
| 38. Municipal and regional governments should regularly distribute educational materials to interface residents. | ✓ | | | | |
| 39. Insurance agents should distribute educational materials with each policy renewal of an interface dwelling. | | | | ✓ | |
| Part V: EVACUATION<br>**Allow More Local Decision Making on Evacuations:** | | | | | |
| 40. The requirements for issuance and lifting of evacuation orders should be reviewed by the provincial government to ensure that decisions can be made by those people with the best information, closest to the action, who are competent to do so. Decisions should not always be dependent on the Office of the Fire Commissioner in Victoria. | ✓ | | | | |
| **Increase Understanding of the Evacuation Process:** | | | | | |
| 41. The province should target greater resources at ensuring better awareness by the public about the stages of evacuation, including the procedures to be followed during an evacuation and after the lifting of an evacuation order, particularly in areas of high interface fire risk. | | ✓ | | | |
| 42. The procedures and powers of the police should be clarified and the permit re-entry process standardized so that all affected responders, evacuees, media and others understand the process, its logic and the location of the permit issuing authority. | | ✓ | | | |
| **Simplify Access to Post-Evacuation Assistance:** | | | | | |
| 43. The appropriate agencies should streamline and simplify registration processes and procedures, making it easier for wildfire evacuees to obtain the basic necessities of life during an already stressful time. | | ✓ | | | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| Part VI: RESOURCES<br>**Implement Firefighting Equipment Database:**<br>44. The Office of the Fire Commissioner should implement a searchable database to maintain a current and accurate province-wide inventory of private and public sector equipment available for fire response. | | ✓ | | | |
| **Access Local Firefighting Expertise:**<br>45. The Ministry of Forests, Forest Protection Branch should implement a modern records management system to maintain a current and accurate province-wide inventory of certified forest fire fighters available for fire response at the local level.<br>46. The Forest Protection Branch should consider some mechanism, other than retaking the S100, that allows past experience in the forest industry or fire fighting to be recognized as equivalent certification, as a means of ensuring adequate local resources are available in times of extreme need.<br>47. Pre-emergency preparedness models should be consistently implemented province wide by the Forest Protection Branch. | | ✓<br>✓ | ✓ | | |
| **Establish Consistent Pay Rates Province Wide:**<br>48. The Forest Protection Branch and the Office of the Fire Commissioner should ensure that pay rates and payment criteria for firefighting personnel are pre-established, consistent and understood by all parties. | ✓ | | | | |
| **Restore Crews:**<br>49. The Forest Protection Branch should restore its Type 1 unit crew complement to 27. | ✓ | | | | |
| **Eliminate Delays:**<br>50. As a priority, The Forest Protection Branch should review the Danger Tree Assessment and Removal Process, as well as any other sources of delay, so that fire crews can be dispatched in a safe yet efficient manner to improve fire suppression effectiveness. | ✓ | | | | |
| **Pay for Volunteer Firefighter Training:**<br>51. Training for volunteer firefighters should be funded by municipal and regional governments. | | | | ✓ | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Treat Volunteers as Equals:**<br>52. Volunteers must be treated as valued team members and fully informed of policies and expectations during emergency events. | | ✓ | | | |
| **Involve First Nations:**<br>53. The Ministry of Forests should explore ways to enhance the participation of First Nations in forest fire fighting and fuel load reduction activities. | | ✓ | | | |
| **Provide Better Maps:**<br>54. The Ministry of Sustainable Resource Management should accelerate the completion of the major mapping initiative currently being undertaken to ensure it is available for use in future fire seasons. | | ✓ | | | |
| **Utilize Sprinklers:**<br>55. Communities and homeowners in the interface should be encouraged to invest in methods of self-protection such as sprinklers as soon as possible. | | | | ✓ | |
| Part VII: FINANCIAL ACCOUNTABILITY<br>**Maintain Financial Accountability of Wildfire Response System**<br>56. Following each major fire season, the provincial government should undertake a program of audits to examine, from a value-for-money perspective, the effectiveness and economy of the financial administration systems used by the Provincial Emergency Program, The Office of the Fire Commissioner, and the Ministry of Forests, Forest Protection Branch. | | ✓ | | | |
| Part VIII: POST-EMERGENCY RECOVERY<br>**Prepare the Recovery Plan Before the Emergency**<br>57. Every emergency management plan should include a recovery committee composed of representatives from local government, volunteer and funding agencies, the Provincial Emergency Program, local clergy and affected residents. | | ✓ | | | |
| 58. For each natural disaster, a provincial "umbrella" committee with a designated lead agency should be established for the purpose of collecting donations and allocating awards. | ✓ | | | | |

| 2003 Firestorm Provincial Review | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Deal With Watershed Restoration**<br>59. The provincial government, in partnership with local governments, should examine watershed restoration as soon as possible, to identify the areas of severe watershed destruction and develop a plan for the protection and rehabilitation of these areas. | | ✓ | | | |
| **Engage Federal Government in Funding Fire Prevention**<br>60. In the short term, the federal government should examine the possibility of developing a program on a cost-shared basis with provincial and local governments that invests in the fireproofing of interface communities. This investment in prevention will undoubtedly result in a reduction in future damage costs under the Disaster Financial Assistance Arrangements. | | ✓ | | | |

| 2001/02 Report 1: Managing Interface Fire Risks | Implementation Status | | | | |
|---|---|---|---|---|---|
| | Fully | Substantially | Partially | Alternative Action | No Action |
| **Part II: ASSIGNING RESPONSIBILITIES**<br>3. The Ministry of Forests should formalize in legislation its response priorities relating to the protection of human life, property and natural resources. | | | | ✓ | |
| **Part XIV. GATHERING AND REPORTING INFORMATION**<br>22. The Interface Fire Committee should gather complete and reliable information about the nature and extent of the interface fire issue in the province and use the information to report on the management of the risks in communities with high or moderate risk associated with this hazard. | | ✓ | | | |

# British Columbia Firestorm 2003 Provincial Review

## *PART I - FOREST MANAGEMENT:*

### *Province to Lead Strategic Plan Development:*

**Recommendation #1**

**The provincial government should lead the development of a strategic plan in cooperation with local governments to improve fire prevention in the interface through fuel management. The plan should:**

**a) Focus on identification of those areas of the province where communities, infrastructure, and watersheds have the greatest potential to be impacted by large-scale fires.**

*Implementation Status: Substantially implemented*

**b) Identify and assign fuel management priorities based on threats to human life, property and resource values.**

*Implementation Status: Partially implemented*

**c) Require a community protection plan in those communities with a high probability and consequence of fire in the interface zone.**

*Implementation Status: Alternative Action*

**d) Be cost shared with local governments.**

*Implementation Status: Partially implemented*

**e) Give priority for funding, fire management planning, fuels mitigation, and protection to these areas.**

*Implementation Status: Partially implemented*

- MoF has expanded its work on hazard mapping and identifying "high-risk" communities that have the greatest potential to be impacted by large-scale fires. There are currently over 100 communities identified as medium to high interface fire risk. PEP continues to promote the Hazard, Risk, and Vulnerability Analysis (HRVA) electronic toolkit for use by local governments and First Nations in planning for all hazard emergencies. Twenty-one applications to UBCM for the development of a Community Wildfire Protection Plan have been approved and funded in cooperation with the Union of British Columbia Municipalities (UBCM). Three provincial presentations promoting Community Wildfire Protection

Planning, Fuel Management, and Fuel Management Pilot Projects were delivered in January of 2005. Three additional presentations will be delivered in April. Phase II uptake for funding of Community Wildfire Protection Plans is underway, and twenty-one additional communities have requested Strategic Threat Analysis data and funding information. Preliminary discussions have taken place with first Nations Emergency Services, to either develop a parallel structure, or incorporate First Nations communities within these initiatives.

One of the principle criteria for funding approval for community wildfire protection plans and pilot projects is based on the principle of in-kind funding from the requesting community.

A Provincial Interface Strategic Threat Analysis, funded in cooperation with U.B.C.M., was received from our contractor in December of 2004. This data was developed to identify fire behaviour spotting potential in critical value areas. This data is currently available to community planners upon request. Updated analytical results to-date indicate that the potential interface treatment area is much larger than the 400,000 hectares reported by the Filmon review team. Areas for which appropriate data exists conservatively indicate that 1.7 million hectares of forest fuel may require treatment. Further refinement of this data will be required to evaluate the perceived increase in fire potential and risk associated with Mountain Pine Beetle attacked timber. Additionally, further data will be required to complete the analysis on Vancouver Island.

Resources are currently being acquired to lead the development and delivery of a fuel management program, strategy and monitoring capability. The MoF hired a Superintendent of Fuel Management November 1, 2004 to coordinate activities provincially. Interviews for five Fire Centre fuel specialist positions are complete with offers pending. Interviews for three MOF regional planning positions will be held in May. These positions will work with other agencies and local governments to facilitate and encourage the development of Community strategic fuel management and protection plans under cost sharing agreements to mitigate the hazard.

*Undertake Fuel Treatment Pilot Projects:*

**Recommendation #2**

**The provincial government should undertake a series of fuel treatment pilot projects in cooperation with municipal and regional governments in locations of high interface fire risk to demonstrate and prove the social, economic, and ecological costs and benefits of fuel treatments.**

*Implementation Status: Partially implemented*

- $1 million has been set aside under the Forest Investment Account for Fuel Treatment Pilot Projects. Pilot projects have been initiated with several local governments including Logan Lake, Cranbrook, East Kootenays Regional District, and Prince George, with projects pending for Telkwa and Pemberton. Projects will demonstrate fuel reduction techniques as well as test environmental and economic effectiveness. These projects involve cooperation and participation from the communities involved, as well as MoF and UBCM.

**Recommendation #3**

**The provincial government should commit new funding for its share of the fuel management program.**

*Implementation Status: Partially implemented*

- Funding in the amount of $4 million has been requested as part of the 2005/06 budget submission.

*Adopt Fire Smart:*

**Recommendation #4**

**Municipalities within fire prone areas should formally adopt the Fire Smart (Partners in Protection 2003) standard for community protection both for private and public property.**

*Implementation Status: Substantially Implemented*

- The OFC, MoF, Public Affairs Bureau (PAB) and PEP partnered on the publication and delivery of:
  - 570,000 FireSmart Home Owners Manuals to households around BC
  - 1000 FireSmart Community Planner Manuals for distribution to fire departments, building departments and local governments
  - 500 FireSmart PowerPoint Presentations for distribution to fire departments.

OFC, MoF, PEP and local fire departments have collaboratively delivered over 50 FireSmart presentations to local governments and the public. Local governments continue to request FireSmart

information from the provincial agencies and many have adopted the FireSmart guidelines in their development approval process. Full implementation requires a significant commitment from local governments (not municipalities) in fire prone areas.

**Recommendation #5**

**At a minimum, this standard should be applied to all new subdivision developments.**

*Implementation Status: Alternative Action*

- FireSmart is a set of guidelines. Subdivision applications are approved by either the authority having jurisdiction (local governments) or the Ministry of Transportation. Many local governments have included the FireSmart guidelines in their subdivision development approval process. Full implementation requires a significant commitment from all local governments (not just municipalities) in fire prone areas.

*Look at Insurance Rates:*

**Recommendation #6**

**The insurance industry should encourage and reward, through its rate-setting process, dwellings and communities built to acceptable standards.**

*Implementation Status: Alternative Action*

- The insurance industry sets its' own policies and standards, as well as coverage rates.

  PEP, OFC, FPB and PAB will continue to work closely with the insurance industry in regards to preparedness, planning, response and recovery measures activities in British Columbia.

*Assess Land Use Plans:*

**Recommendation #7**

**The province should review and amend Land Use Plans and LRMPs to incorporate fire management considerations. Fire experts must be available to influence and participate in land management planning.**

*Implementation Status: Partially implemented*

- Fire Management Planning expertise will be developed provincially through the implementation of three Fire Management positions approved for MoF Regions, hiring expected by spring 2005. MSRM and MoF will work together to consider incorporating fire management criteria through land use plans and the land and resource management planning process.

*Reduce Fuel Buildup in Parks:*

**Recommendation #8** **The province should allow selective tree harvesting in provincial parks to reduce fuel buildup.**

*Implementation Status: Fully implemented*

- BC Parks policy now allows for tree removal in parks and protected areas to reduce fuel build-up. Projects are taking place in Silver Star, Robson and Manning Parks. To support the tree removal policy, best management practices for tree removals in parks and protected areas have been developed. Government has approved the use of revenue derived from park tree removal projects to offset the costs of tree removal programs.

  BC Parks has also completed a Wildfire Risk Assessment for southern BC parks that identifies high hazard areas—the balance of the provincial assessment will be complete by April 2005.

  BC parks, through fire management plans will identify areas where fire will be allowed to burn as a part of the natural fire regime when appropriate to do so.

*Ministry of Forests Responsible for Fire Suppression in Parks:*

**Recommendation #9** **The Ministry of Forests, Forest Protection Branch should take the lead in suppressing fires in provincial parks, as proposed under the new Wildfire Act.**

*Implementation Status: Substantially implemented*

- MoF has had the lead in suppressing fires in provincial parks for a number of years. However, to complement the new Wildfire Act, BC Parks will be updating the current memorandum of under-standing with MoF on fire management in parks to define a cooperative approach to wildfire management and planning.

*Use Prescribed Burning:*

**Recommendation #10** **The province should establish strictly controlled conditions for using prescribed burning as a fuel management tool.**

*Implementation Status: Partially implemented*

- Larger scale projects using prescribed burning were carried out in 2004 in the East Kootenays and Robson Provincial Park. Best practices for prescribed burn planning have been developed and will evolve further with national development. Burn boss certification requirements have been defined, and a prescribed burn boss training course is currently under development to ensure the highest standards for planning, operations and post fire assessment are incorporated into the use of prescribed fire and fire management. Existing training and guidelines are being strengthened.

  The impact of burning on air quality continues to be a factor in limiting the amount of prescribed burning. The MoF will work with Water, Land and Air Protection (WLAP) regarding the Open Burning Smoke Control Regulation with regard to implications on prescribed burning and harmonizing each agency's respective legislation.

*Deal With Slash:*

**Recommendation #11**

**The province should require all slash within or adjacent to a wild land urban interface to be removed, treated or burned on site to mitigate the surface fuel hazard.**

*Implementation Status: Partially implemented*

- The MoF is developing appropriate conditions in the Wildfire Act and Regulations regarding management of slash accumulations in and adjacent to interface areas. Proposed regulations make provision for the assessment and timely abatement of identified fire hazard within and adjacent to interface areas. An Official has the authority to order the abatement of a hazard within a specified time frame. The Wildfire Act and Regulations are intended to be implemented for the 2005 fire season. Local officials may be authorized to require hazard reduction adjacent to and within their boundaries through by-laws.

*Consider Amending the Annual Allowable Cut:*

**Recommendation #12**

**The Ministry of Forests should consider amending Annual Allowable Cut (AAC) determinations in fire-prone ecosystems to encourage hazard reduction treatments by tenure holders in marginal and uneconomic tree stand areas within the wild land urban interface.**

*Implementation Status: Partially implemented*

- The Chief Forester will consider whether the AAC is an impediment to fuel management in interface areas, and make appropriate adjustments in determining the levels of allowable annual cuts in timber supply areas and tree farm licenses. Due to the special nature of this request, legislative amendments may be required. To test the potential impact, a Pilot study is underway in the Arrow Timber Supply Area.

*Look at Alternatives to Stumpage:*

**Recommendation #13** **The province should investigate alternatives to stumpage as an incentive to encourage the harvest of high-risk low value fuel types.**

*Implementation Status: Substantially implemented*

- MoF is developing policies regarding stumpage for low value forest types. Pilot projects will further investigate methods to minimize fuel treatment costs.

The Minister of Forests recently provided direction by approving a strategy that addresses the disposal of timber within the Interface Area. The strategy addresses the disposition of timber resulting from fuel management activities which is consistent with appropriate market principles under current softwood lumber negotiations. Additional pilot projects will be entertained to further investigate methods to minimize fuel treatment costs.

*More Research and Development:*

**Recommendation #14** **Industry should undertake research into the use of small diameter trees in non-traditional forest products markets such as energy and bio-fuel.**

*Implementation Status: Alternative Action*

- MoF is currently in discussions with Energy & Mines (E&M) who are the lead agency in energy production alternatives. E&M has approved some projects including co-generation of electricity from the incineration of wood-waste. The MoF would entertain non-commercial and small-wood utilization proposals.

*Retain The Knowledge Base:*

**Recommendation #15**

**The province and the forest industry must pay particular attention to retaining the existing knowledge about fuel reduction practices and continue to develop and expand that knowledge base.**

*Implementation Status: Partially implemented*

- The MoF is maintaining its current knowledge base about fuel reduction practices as well as working with the Canadian Interagency Forest Fire Center (CIFFC), Forestry Canada, FERIC, international partners and other agencies to ensure currency in practices. The MoF, using the Union of BC Municipalities' website, is sharing information with local governments as well as other agencies. A provincial fuel specialist is in place and five field fuel specialists are being hired.

*Share Information:*

**Recommendation #16**

**Wherever possible, British Columbia should focus on collaboration with North American and other jurisdictions to share knowledge and pursue research.**

*Implementation Status: Fully implemented*

- B.C. is recognized as a leader in fire suppression and willingly shares it knowledge and expertise with other jurisdictions through CIFFC (Canadian Interagency Forest Fire Centre) and the CFS (Canadian Forestry Service).The MoF have established an agree-ment with the CFS for fire and fuel research in Mountain Pine Beetle with particular emphasis on community protection. The MoF also participates with other agencies like FERIC (The Forest Engineering Research Institute of Canada) in sharing funding and research knowledge.

  Following are two website links providing additional information on work being conducted in this field.

  **http://fire.feric.ca/36162002/36162002.asp** (copy attached), and **http://fire.feric.ca/36232003/WorkshopPresentation1.htm**.

  PEP continues to work nationally and internationally in sharing emergency management best practices.

## *Part II: EMERGENCY MANAGEMENT*

### *Require Wildfire-Proofing Across the Province:*

**Recommendation #17** **The British Columbia government should require municipal and regional governments to implement building codes and land use requirements that have proven useful elsewhere in limiting the impact of interface fires.**

*Implementation Status: Alternative Action*

- The Office of the Fire Commissioner and Forest Protection Branch has actively promoted the FireSmart publications during numerous presentations to local governments and the public throughout British Columbia. Local governments have been encouraged to implement the FireSmart Land Use Planning Guidelines and recommend fire resistant roofing or exterior building products during the permitting process, prior to construction. Homeowners have been encouraged to select fire resistant materials when replacing roofs or other exterior components.

  The Community Charter that came into effect on January 1, 2004 includes provisions for Concurrent Authority in several spheres including Building Regulation. The intent of Concurrent Authority was to limit the variations of the provincial Building Codes that have arisen over the years in jurisdictions throughout British Columbia. Future variations to the Building Code that are recommended by local governments will have to be approved by the Minister of Community, Aboriginal and Women's Services. This includes recommendations from local governments addressing code changes to prevent the spread and impact of interface fire. The Ministry of Community, Aboriginal and Women's Services will evaluate all requests for changes to the BC Building Code, but have not received any requests for Building Code changes specific to Interface from local governments.

  Some local governments have used a variety of tools to promote fire safety in Interface areas. For example, the District of Langford, has amended their Official Community Plans to restrict development in medium and high hazard areas through the development permit process.

*Make Local Emergency Plans Mandatory:*

**Recommendation #18** **As is the case for municipal governments, regional districts should be required through legislation to provide local emergency plans developed to a provincial standard and maintained to a current status.**

**a) Local plans should be based on the British Columbia Emergency Response Management System (BCERMS).**

*Implementation Status: Substantially Implemented*

- To support the development of standardized emergency programs, the province has implemented a multi-year grant program. In 2004, a total of $1million was provided to 42 municipalities and 27 regional districts through UBCM. This program will provide an additional $800,000 in 2005 and $700,000 in 2006. Each applicant is required to participate in the Disaster Resilient Communities Initiative which specifies the structure of emergency programs and the planning process. BCERMS is a fundamental part of this initiative and many communities are reporting operational successes following the adoption of BCERMS. BCERMS is a nationally and internationally recognized model of best practice. The BCERMS model was a key success factor in the organized response to events such as: Avian Influenza, Squamish/Pemberton Flooding, and Firestorm 2003. Public Safety and Emergency Preparedness Canada is adopting a version of BCERMS called NERS or the National Emergency Response System.

  Overall, over 80% of local governments have adopted BCERMS. The majority that have not adapted BCERMS are in the process of doing so.

**b) Plans should be in a standardized format/template consistent across the province, and be made consistent with provincial plans.**

*Implementation Status: Substantially Implemented*

- BCERMS is based on an integrated and interoperable emergency management structure. As indicated above, there is substantial adoption of BCERMS and the standardization of planning it provides. It is the nature of planning that it be a dynamic process with continual re-examination and renewal of procedures based on best practice. To this end, PEP continues to evaluate the current standardized, all-hazard and integrated model, and update plans and templates such as the *Local Authority Planning Guide* and standard emergency planning templates as required. This on-going dynamic approach recognizes the strengths of mutual support and provides for three levels of achievement: essential, enhanced and comprehensive emergency programs.

**c) Plans should be developed from an "all hazards" perspective.**

*Implementation Status: Fully Implemented*

- British Columbia's approach to emergency management is from an "all hazard" perspective. Completing a Hazard, Risk and Vulnerability Analysis is a requirement of the Local Authority Emergency Management Regulation. "A local authority must reflect in the local emergency plan prepared by it under section 6 (2) of the Act (a) the potential emergencies and disasters that could affect all or any part of the jurisdictional area for which the local authority has responsibility, and (b) the local authority's assessment of the relative risk of occurrence and the potential impact on people and property of the emergencies or disasters referred to under paragraph (a). Local government emergency response plans are based on hazards present in a community. Plans are all hazard with specific contingency plans or checklists specific to a hazard where necessary." All hazard planning is supported by the Hazard, Risk and Vulnerability Analysis toolkit at: **http://www.pep.bc.ca/hrva/hazard.html** and **http://www.pep.bc.ca/hrva/toolkit.html.**

**d) Plans must be practical, comprehensive and updated annually.**

*Implementation Status: Substantially Implemented*

- Communities are encouraged by PEP Regional Managers to re-examine plans annually and any time a change or risk is anticipated. Preparedness advisories, senior official courses and personal communications are used to provide information to communities. To be practical for the range of community sizes in BC, plans need to be developed to an appropriate level recognizing risk and capacity of the community. For this reason, plans are developed to three levels of achievement in accordance with the Community Emergency Program Review criteria: Essential, Enhanced, and Comprehensive. See **http://www.pep.bc.ca/cepr/review.html**

**e) Plans must include mandatory mutual aid agreements among municipal and regional districts.**

*Implementation Status: Alternative Action*

- Mutual aid is encouraged through sharing of resources and capability. This is achieved through the creation of plans which are interoperable and developed with input from first nations and neighbouring jurisdictions. The Community Charter does not support making this type of agreement mandatory nor

is it practical or necessary to make this mandatory when communities are voluntarily seeking integration with other emergency programs. Developing mutual aid and assistance agreements with neighbouring communities, organizations and First Nations is stated as an essential component of an emergency response plan in the draft Community Emergency Management Guide in the final stages of development at PEP.

**f) Plans must incorporate clear obligations and personal responsibilities of residents living in interface fire hazard areas.**

*Implementation Status: Substantially Implemented*

- Emergency preparedness starts as a local responsibility. For example, the public is encouraged to be self-sufficient during the first three days after a major earthquake or disaster. Local governments are responsible for ensuring that the community is prepared for any emergency or disaster. The province supports community emergency planning and preparedness. Personal responsibilities of residents living in interface fire hazard areas are defined in FireSmart pamphlets and guides distributed and available throughout BC. The province actively promotes the FireSmart program and contingency planning for interface fires.

**g) Ideally, plans should include First Nations involvement.**

*Implementation Status: Substantially Implemented*

- All communities, including local governments and First Nations, should engage all potentially impacted jurisdictions in a joint planning process. Developing mutual aid and assistance agreements with neighbouring communities, organizations and First Nations is stated as an essential component of an emergency response plan in the draft Community Emergency Management Guide in the final stages of development at PEP. The province has an agreement with Indian and Northern Affairs Canada to support First Nations emergency response.

  During Fire Storm 2003 First Nations representatives were involved at both local government Emergency Operations Centre (EOC) level and Provincial Regional Emergency Operations Centre (PREOC) levels in developing integrated evacuation, re-entry and recovery plans with local governments. During the fires in Lillooet in 2004, First Nations leaders were part of a joint EOC Directorship ensuring seamless emergency response, including advanced planning.

**h) Plans must have a communications element that incorporates local media into the disaster response effort.**

*Implementation Status: Fully Implemented*

- The importance of a fully staffed public information section and proactive media relations is highlighted in the Local Authority Planning Guide (1996) p30. The creation of a public information plan is considered an essential element of an emergency program in the draft Community Emergency Management Guide. Preplanning to designate a public information section is an enhanced objective. The importance of pro-active media relations as part of the disaster response and recovery effort is continuously promoted in training and guidance provided to local government. The creation of public information plans is supported by Joint Emergency Preparedness Program funding and UBCM grants.

## *Maximize British Columbia's Firefighting Expertise*

**Recommendation #19** **Provincial and local governments should ensure both forest firefighters and structural firefighters are cross trained in each other's area of competence.**

*Implementation Status: Substantially implemented*

- The OFC and MoF worked together to ensure municipal fire fighters received supplemental training to fight forest fires. Courses offered include S100 (Basic Fire Suppression & Safety) and S215 (Fire Preparations in the Wildland/Urban Interface) and were made available to all fire departments prior to the 2004 fire season through training partners such as the Fire Chief's Association of British Columbia, Fire Training Officer's Association of British Columbia, the OFC and MoF. Over 200 fire service instructors have qualified as S-215 instructors within their fire departments. The Ministry of Forests continues to support the local fire departments during in-house S-215 training by providing Forest Service personnel as co-instructors.

  There is a fundamental difference in fire response between the two agencies. Fire departments have been responding to structure and brush fires within their jurisdictions for a number of years. Interaction between Fire Department responders and Wildland firefighters has become more frequent within the urban interface area. The MoF has made changes to the equipment carried aboard wild land firefighter vehicles to ensure that water connections are interchangeable, which seemed to be one of the significant challenges when both organizations arrived at interface fire events.

Wildland crews are cross trained on approaching burning vehicles and homes that may contain propane tanks, gas containers and a variety of substances that present an explosive hazard as well as toxicity levels.

The suggestion that wild land fire fighters learn basic tactics of structural fire departments is a significant change in business practices impacting mandate, training, tactics and equipment. Wildland crews and resources currently do not become engaged in activities involving burning structures unlike structural fire fighters who have become involved in brush fire situations. Under the current mandate any level of significant cross training with wild land firefighters is not determined to be necessary. That said, and as described above, cross training does occur.

The Fire Commissioners Office and the MOF have also determined that the OFC will have jurisdiction over deployment of the OFC/UBCM Sprinkler Protection Units, and training and hiring of contractors trained to deploy this equipment leaving wild land fire fighters to address the wild fire.

**Recommendation #20**

**The province should establish a working group of officials from a broad spectrum of interface fire responder agencies, fire training agencies, fire prevention agencies, persons with firefighting expertise, and other appropriate members to examine best practices relating to interface fires and recommend changes to the government.**

*Implementation Status: Partially implemented*

- In conjunction with Natural Resources Canada, the B.C. MoF organized an international "best practices" workshop, in Winnipeg, December 2004, for Canadian interface fires. As well, British Columbia is a significant contributor to Partners in Protection (PIP)—an Alberta-based coalition dedicated to raising awareness and providing information that will reduce the risk of wildfire losses in the wildland/urban interface. A discussion of B.C. stakeholders will be initiated to the willingness to form a similar group under the B.C. Provincial Interface Committee or as a BC Chapter of PIP.

  Other organizations such as the Thompson-Okanagan Interface Committee (TOIC), Kootenay Interface Steering Team (KIST), South Coastal Interface Committee, Fire Chiefs' Association of British Columbia (FCABC) and Union of British Columbia Municipalities (UBCM) are examining best practices and actively working to minimize the impact of interface fires.

*Adopt Automatic Aid:*

**Recommendation #21**

**The province should adopt the principle of automatic aid to ensure that emergency services can be delivered in all areas of the province under the mandatory emergency plans.**

*Implementation Status: Alternative Action*

- While fire prevention is mandated by provincial legislation (Fire Services Act), fire suppression remains a service that is provided to the public based on local decisions to implement the service. Fire Departments are generally created following adoption of an Establishing Bylaw at the local level. The Establishing Bylaw identifies the services that will be provided (such as suppression of structure fires) and the geographical boundaries within which the service will be provided (usually based on taxation). Local governments are encouraged to develop Mutual Aid Agreements with neighbouring jurisdictions in order provide better levels of fire and rescue protection to the public.

  The OFC has developed a Discussion Paper that explains Automatic Aid and has circulated it to fire departments throughout British Columbia. The Discussion Paper encourages elected and appointed local government and fire department officials to examine and consider the implementation of an Automatic Aid program. Full implementation of this recommendation requires the acceptance of the concept by all local governments in British Columbia.

  Barriers to the successful implementation of this recommendation include the requirement for formal service provision agreements between the service supplying and service receiving jurisdiction. The Ministry of Community, Aboriginal and Women's Services Advisory Services Branch has referred this issue to the Attorney General for a legal opinion and recommendations.

## *Part III: COMMAND AND CONTROL*

*Standardize BCERMS and ICS Use and Training:*

**Recommendation #22**

**To gain the full value of BCERMS and the Incident Command System (ICS) it must be universally adopted by all provincial and local government agencies.**

*Implementation Status: Substantially Implemented*

- Use of the BCERMS/ICS model for emergency planning is being encouraged and promoted through the Union of British Columbia Municipalities to communities and regional districts. $25,000 grants are available to regional districts to enhance their emergency

preparedness, response and recovery capabilities and many communities included ICS training in their proposals. $10,000 grants were also provided to high risk communities for plan integration.

Currently is it estimated that 80% of local governments have adapted BCERMS, and the majority of those that have not are doing so.

100% of provincial ministries and agencies has adapted BCERMS. It has also been adapted for use in provincial government's business continuation planning, which is led through Risk Management Branch.

**Recommendation #23**

**Training course material, delivery and examination for ICS should be standardized across organizations.**

*Implementation Status: Substantially Implemented*

- Incident Command System Level 100 Training (Self Study) is being made available to emergency response personnel free of charge through 2004/05. This course is also being re-formatted as an on-line, e-learning program, which will be available March 1, 2005. Certification is available for both of these options.

A Standards for Training Review Committee, a sub-committee of the BCERMS Advisory Committee, has developed assessment criteria for review and approval of BCERMS Training Provider Applications and BCERMS training materials. This ensures that training material, delivery and examination for ICS is consistent through organizations.

Incident Command System Training (Levels 100–400) is available to local authorities through the Justice Institute, as well as through twelve contracted training providers approved through the Inter-agency Emergency Preparedness Council (IEPC). Four additional training providers are currently being assessed by the BCERMS Sub-Committee.

**Recommendation #24**

**The province should consider the establishment of a single, province-wide focus for training within British Columbia to achieve:**

**a) Implementation of consistent standards and policies for the Office of the Fire Commissioner, Ministry of Forests, and the Provincial Emergency Program to allow integration from within the province's emergency response structure.**

*Implementation Status: Substantially Implemented*

**b) Development and continual upgrading of a common curriculum for all ICS training in British Columbia.**

*Implementation Status: Substantially Implemented*

- The Interagency Emergency Preparedness Council (IEPC), established a British Columbia Emergency Response Management System (BCERMS) Advisory Committee (BAC), that is mandated to develop the standards and requirements for all aspects of BCERMS training in the province. This committee, consisting of representatives from key ministries, support ministries, crown corporations and PEP, as well as other organizations, meet regularly to:
  - review and update the BCERMS standard;
  - develop and present the training standards for BCERMS and a recommended implementation plan;
  - develop a certification and equivalency process; and,
  - establish a common set of forms, reports, software and terminology in support of BCERMS.

· *Continuing Education:*

**Recommendation #25**

**Maintaining ICS accreditation over time should be dependent on a system of continuing education credits and participation in regularly-scheduled, integrated simulations using ICS.**

*Implementation Status: Alternative Action*

- To provide opportunities for more British Columbians to become better prepared to respond in an emergency, standards have been developed for potential provincially-approved B.C. Emergency Response Management System (BCERMS) training providers.

  The standards document, entitled Standards for BCERMS Training Providers and BCERMS Training Materials, was developed by the Inter-agency Emergency Preparedness Council (IEPC), a committee of representatives from provincial ministries, Crown corporations and major utilities.

  Training is provided throughout British Columbia on a regular basis to the standards signed off by the IEPC.

## *Part IV: COMMUNICATIONS*

### *Develop a Crisis Communications Strategy*

**Recommendation #26**

**The province should immediately undertake the development of a provincial communications strategy and protocol for major emergency events defining the roles and responsibilities of those involved. *The strategy should:***

a) **Include the participation of all key stakeholders including the media.**

*Implementation Status: Fully Implemented*

b) **Establish clear principles and protocols about the release of information.**

*Implementation Status: Fully Implemented*

c) **Identify how the media and the internet can be used in times of emergency as a technical resource and to disseminate information to the public.**

*Implementation Status: Fully Implemented*

- On May 31, 2004, the Provincial Cabinet released the document, "British Columbia Crisis Communications Strategy for Major Provincial Emergencies". The strategy outlines the province's crisis communications policies, roles and responsibilities. It ensures that accurate, clear and timely public information affecting the safety, health, and property of the citizens of British Columbia is delivered during major emergencies.

  The strategy was implemented for use during the 2004 forest fire season and twenty-six emergency information officers were sent by the Province to support emergency management at seven provincial emergency operations centres, four local government operations centres and two Forest Protection Branch fire centres.

### *Establish Emergency Communications SWAT Team*

**Recommendation #27**

**To coordinate on-site communications during times of emergency, the province should establish a media communications SWAT team with members from municipal, regional, provincial and federal governments and including other major stakeholders as appropriate.**

*Implementation Status: Fully Implemented*

- A database of government emergency public information specialists was assembled in the period leading up to the 2004 forest fire season. It is regularly updated by the Public Affairs Bureau to ensure staff they are available for any emergency deployments.

  Prior to the 2004 forest fire season, a number of 'quick response teams' were identified for deployment. Some were eventually deployed to provincial regional and local government emergency operations centres. Staff also provided support to the Ministry of Forests' Protection Branch when requested.

  The province and the federal department of Public Safety and Emergency Preparedness Canada (PSEPC) signed an agreement in June 2004 to allow, if required, the use of federal government communications staff located in western Canada to support B.C.'s provincial emergency response structure. A total of 12 information officers were identified however there were no deployments from this group this last summer.

**Recommendation #28**

**The members of this team would be trained in crisis communications and would serve to facilitate, not stem, the flow of information.**

*Implementation Status: Fully Implemented*

- Prior to the forest fire season, training sessions were provided to emergency information officers in crisis communications practices and the new provincial crisis communications strategy, as well as the B.C. Emergency Response Management System.

*Cooperate on Training:*

**Recommendation #29**

**All jurisdictions should consider intensifying inter-agency training efforts, including the use of large-scale interface wildfire simulations, to improve communications.**

*Implementation Status: Substantially Implemented*

- The Provincial Emergency Program (PEP) Temporary Emergency Assignment Management System (TEAMS) training, held in each region of the province twice a year, provides the opportunity for other ministries with a response role to participate in focused training. Recruitment of new members is being targeted to ministries that are not currently represented on TEAMS to ensure an effective integrated response. An inter-ministry training exercise is currently being planned for Spring 2005, with one of the goals being to test communications.

The Provincial Emergency Program supports all-hazards inter-agency exercises at all jurisdictional levels. PEP regional and headquarters staff provide expert advice and assistance to a wide variety of stakeholders including local governments, First Nations, private and public sectors. Service providers such as the Justice Institute also provide exercise support.

*Achieve Emergency Radio Inter-Operability:*

**Recommendation #30**

**The British Columbia government should develop and implement a provincial strategy for emergency communications technology focused on moving over time to total inter-operability across agencies throughout the province.**

*Implementation Status: Partially Implemented*

- The Forest Protection Branch and Office of the Fire Commissioner have actively investigated private sector solutions to the problem of radio incompatibility. The FPB organized a demonstration of equipment capable of interfacing all radio frequencies. However, there has not been a decision to invest public funds in any new radio interoperability systems prior to a full examination and analysis of the options.

OFC, MoF and PEP formed a working group to ensure that radio communication systems are aligned with each other. The group's main goals are to: complete a review of tactical radio successes and areas for improvement; and to determine and develop standard operating procedures including improvements where necessary of multi-agency radio use during peak periods.

**Recommendation #31**

**Initial activities should include developing a provincial inventory for all fire, police, ambulance, forestry radios and frequencies to ensure that where radio systems are compatible, they can be programmed with common frequencies or talk groups.**

*Implementation Status: Alternative Action*

- The British Columbia Ambulance Service and BC Forest Service maintain accurate and up to date inventories of valuable assets such as portable and vehicle mounted radios. Accurate records of the operating frequencies are also maintained by the provincial organizations. Police and Fire Departments maintain records of valuable assets. However, neither PEP, MoF nor OFC have been assigned responsibility for the collection of local government radio inventories.

**Recommendation #32**

**Whenever portable and mobile radios for emergency services are replaced to accommodate narrow banding, they should be replaced with new radios that are inter-operable across agencies.**

*Implementation Status: Alternative Action*

- Manufacturers of new radios offered in the marketplace have taken advantage of digital technology that allows frequencies to be easily programmed. With the implementation of narrow banding, programmable radios are becoming the norm across emergency services organizations. The Office of the Fire Commissioner occasionally receives inquiries regarding radio equipment and will recommend programmable equipment for fire departments considering radio replacement.

*Include Amateur Radio Operators in Emergency Response:*

**Recommendation #33**

**All Emergency Operation Centres should include a provision for amateur radio operators, including power and antenna space, in case they are needed.**

*Implementation Status: Substantially Implemented*

- All regions have received commercial radio equipment from various ministries, including MoF, MoT, and PEP, that can be converted to amateur radio use. This equipment has been distributed throughout the regions to augment the equipment already in use in Emergency Operations Centres (EOCs).

  Regional Emergency Radio Representatives from the PEP regional offices as well as Amateur Radio Emergency Services (ARES) representatives have been providing training/recruitment of amateur radio operators in emergency communications.

  Regional Emergency Radio Representatives from PEP have been provided with training and travel funding to assist in recruiting and training Municipal Amateur Coordinators.

  Regional Emergency Radio Representatives will be receiving training in plan writing to facilitate the creation of amateur radio communications plans regionally and the training of local amateur coordinators in doing the same for their communities.

  The Provincial Emergency Radio Advisory Committee (PERAC) is developing guidelines for the deployment of trained volunteers with amateur radio equipment to aid existing facilities and volunteer teams in the province as required.

**Recommendation #34**

**Communications systems should be regularly exercised to ensure that equipment, policies and procedures are functional.**

*Implementation Status: Fully Implemented*

- PEP Regional offices all include amateur radio stations that are exercised on a weekly basis by the volunteer teams assigned to their operation and maintenance.

  PEP runs a directed HF net on a weekly basis to facilitate check-ins and emergency amateur radio equipment testing throughout the province.

*Educate the Public about Interface Wildfires:*

**Recommendation #35**

**A cooperative public education program should be undertaken, building on material already available in various British Columbia government departments and agencies, as well as from external sources.**

*Implementation Status: Fully implemented*

- The FireSmart program has been adopted by the OFC, MoF, PEP and PAB as the provincial guideline for public education on interface fire prevention measures. In 2004, the FireSmart community planning manual was introduced and delivered to all levels of local government. The manual was mailed to every fire chief, municipal and regional district government office and numerous first nations offices. MoF in cooperation with the OFC arranged meetings with local government and held open public meetings to further draw their attention to their identified roles in planning, mitigating and preventing interface fires (see #5).

  The Province provided a major print and media educational campaign prior to and during the 2004 fire season. In addition weekly media briefings were held from June through until September informing the public about fire activity measures. Ministers from MoF and CAWS took an active role in disseminating prevention measures to the public.

  Senior Emergency Officials training workshops were also delivered by PEP in the spring of 2004, of which hundreds of senior emergency officials from local governments attended. Wild land interface fire information was provided to these officials.

  PEP delivered Elected Officials courses to over 400 local government elected officials in fall 2002 and spring 2003. PEP will deliver similar courses in 2005/06.

There has been significant attendance at FireSmart meetings, with strong support from communities (see FireSmart recommendation).

**Recommendation #36**

**This education campaign must inform interface residents about the risks and their responsibilities in planning and preparing for and responding to interface fires.**

*Implementation Status: Substantially implemented*

- To describe actions that individual homeowners can take to protect their property from fire, a new Homeowner's FireSmart manual was developed and distributed (over 570,000 copies in circulation) through fire departments, fire centres, MoF zone offices, public meetings, MLA constituency offices, the insurance industry and the OFC in 2004. (see #5 & #35)

**Recommendation #37**

**The campaign should be delivered to school children as well as adults.**

*Implementation Status: Substantially implemented*

- A lesson plan and teachers resource manual called "The Force of Fire" was developed by a contractor hired by a consortium of Forest Industry companies in the southern interior. The MoF provided support materials. The course is designed for the primary, intermediate and secondary levels. Distribution has taken place in school districts throughout the north and southern interior.

**Recommendation #38**

**Municipal and regional governments should regularly distribute educational materials to interface residents.**

*Implementation Status: Fully implemented*

- The MoF and local governments have been distributing inter-face material to residents since the 1980's. MoF will continue to work with OFC, UBCM and local governments to regularly distribute educational materials such as the Home Owner's Fire Smart Manual.

**Recommendation #39**

**Insurance agents should distribute educational materials with each policy renewal of an interface dwelling.**

*Implementation Status: Alternative action*

- The insurance industry is not directly controlled by the province. That said, insurance industry leaders and industry have for many years worked closely with the province on emergency management initiatives, and the promotion and dissemination of critical educational materials.

Discussions between the Insurance Bureau of Canada and Partners in Protection (PIP) have indicated that the insurance industry is willing to promote Fire Smart Principles. The Canadian Northern Shields Insurance Company produced 200,000 copies of the Home Owners Fire Smart Manual for distribution to clients and financial institutions in 2004.

Insurance Bureau of Canada (IBC) in partnership with the Institute for Catastrophic Loss Reduction printed 150,000 brochures encouraging mitigative actions on the part of homeowners. These brochures were then distributed by IBC member insurers either directly with policy renewal documents or through their broker networks.

## *Part V: EVACUATION*

### *Allow More Local Decision Making on Evacuations:*

**Recommendation #40**

**The requirements for issuance and lifting of evacuation orders should be reviewed by the provincial government to ensure that decisions can be made by those people with the best information, closest to the action, and who are competent to do so. Decisions should not always be dependent on the Office of the Fire Commissioner in Victoria.**

*Implementation Status: Fully Implemented*

- The *Community Charter* that came into effect on January 1, 2004, included provisions for municipalities to empower their fire chief with the evacuation authority of the fire commissioner according to Section 25 of the *Fire Services Act* by adopting an Authorizing Bylaw. Section 522(1) of the Local Government Act enables Regional Districts to adopt a bylaw authorizing the fire chief to "exercise some or all of the powers of the fire commissioner under section 25 of the *Fire Services Act*." This includes the authority to order evacuations.

### *Increase Understanding of the Evacuation Process:*

**Recommendation #41**

**The province should target greater resources at ensuring better awareness by the public about the stages of evacuation, including the procedures to be followed during an evacuation and after the lifting of an evacuation order, particularly in areas of high interface fire risk.**

*Implementation Status: Substantially Implemented*

- The OFC has posted a guideline explaining the stages of evacuation on its website at: (http://www.mcaws.gov.bc.ca/firecom/interface/evac_fire_notice.pdf)

Evacuation information is provided to all District and Regional Fire Chiefs in the province. The OFC has also provided information on stages of evacuation and evacuation procedures to the Public Affairs Bureau for publication and distribution. In addition, the OFC and MoF publicized information about the stages of evacuation during media briefings during the 2004 fire season.

The PEP website also contains a comprehensive all-hazards Evacuation Guideline for local government use.

**Recommendation #42**

**The procedures and powers of the police should be clarified and the permit re-entry process standardized so that all affected responders, evacuees, media and others understand the process, its logic and the location of the permit issuing authority.**

*Implementation Status: Substantially Complete*

- "E" Division is in the process of preparing a written protocol for all RCMP Evacuation Branch Supervisors and police representatives at Provincial Regional Emergency Operations Centres (PREOCs). The protocol will outline the suggested temporary re-entry permit process and will indicate who will issue the permits. The process will expand on the temporary re-entry permits issued during the 1998 Salmon Arm Fire and will make special mention of media access.

  The protocol will not over ride the authority of Incident Commanders to establish limits on access, including media access, in response to legitimate security and safety concerns, but it will articulate the "E" Division position that temporary access to evacuated areas by residents and media should be initiated at the earliest possible opportunity. Access by responders is not an issue–they will not require a permit.

*Simplify Access to Post-Evacuation Assistance:*

**Recommendation #43**

**The appropriate agencies should streamline and simplify registration processes and procedures, making it easier for wildfire evacuees to obtain the basic necessities of life during an already stressful time.**

*Implementation Status: Substantially Implemented*

- The Emergency Social Services (ESS) Program Office, Ministry of Human Resources, has made substantial improvements to the Registration and Referral processes to simplify access to post-evacuation assistance to evacuees.

The ESS Program has adopted the British Columbia Emergency Response Management System (BCERMS) as the standard for ESS operations and all ESS training has been modified to reflect this decision. The ESS Program Office developed a new field manual to be printed and widely distributed that further clarifies policy and procedures in the use of delivery of services to evacuees. The ESS Program has streamlined the delivery of the ESS training to reflect this clarity of policies and procedures. Finally, the ESS Program Office, in cooperation with PEP, has developed new technological registration alternatives and is being tested.

## *Part VI: RESOURCES*

### *Implement Firefighting Equipment Database:*

**Recommendation #44**

**The Office of the Fire Commissioner should implement a searchable database to maintain a current and accurate province-wide inventory of private and public sector equipment available for fire response.**

*Implementation Status: Substantially Implemented*

- The OFC has surveyed all British Columbia fire departments and developed a record of all available public sector fire suppression apparatus in the province. This record will be imported into a Resource Tracking System database that will be maintained by the OFC. The Ministry of Management Services, Purchasing Services Branch has collected information on private sector resources through BC Bid. Private sector resources will also be entered into the Resource Tracking System, which will ensure a province-wide searchable database that identifies public and private sector equipment and resources available for response to major emergencies.

### *Access Local Firefighting Expertise:*

**Recommendation #45**

**The Ministry of Forests, Forest Protection Branch should implement a modern records management system to maintain a current and accurate province-wide inventory of certified forest fire fighters available for fire response at the local level.**

*Implementation Status: Substantially Implemented*

- MoF is expanding its training and certification database (TP2000) to include emergency forest fire fighters, local contractors and volunteers. The database contains information on the level of training and preparedness of each person or company who has indicated their availability in an emergency response situation. MoF is also identifying training needs and potential roles for industry involvement in wildfire suppression through the development of an industry partnership program and communications network.

**Recommendation #46**

**The Forest Protection Branch should consider some mechanism, other than retaking the S100, that allows past experience in the forest industry or fire fighting to be recognized as equivalent certification, as a means of ensuring adequate local resources are available in times of extreme need.**

*Implementation Status: Substantially implemented*

- MoF has established a provincial level partnership network with the forest industry to improve operations and communications (see #45). A consultant is working on streamlining the certification recurrence process for S100 to be proposed to WCB, with the objective to ensure local expertise is utilized in a safe and effective manner.

**Recommendation #47**

**Pre-emergency preparedness models should be consistently implemented province wide by the Forest Protection Branch.**

*Implementation Status: Partially implemented*

- The MoF has implemented a preparedness planning model in all six Fire Centres. The MoF will review Fire Centre preparedness plans in 2005 for consistent application and necessary amendments will be introduced in 2006.

*Establish Consistent Pay Rates Province Wide:*

**Recommendation #48**

**The Forest Protection Branch and the Office of the Fire Commissioner should ensure that pay rates and payment criteria for firefighting personnel are pre-established, consistent and understood by all parties.**

*Implementation Status: Fully Implemented*

- A multi-agency working group consisting of OFC, PEP, MoF, UBCM and the B.C. Fire Chief's Association agreed to reimbursement rates with the understanding that the agreement would be reviewed at the request of any party.

  The Remuneration Task Team completed work on this June 16, 2004.

*Restore Crews:*

**Recommendation #49**

**The Forest Protection Branch should restore its Type 1 unit crew complement to 27.**

*Implementation Status: Fully implemented*

- 5 new unit crews have been added to MoF Protection Program bringing the total number of unit crews to 27. The unit crews are located at Revelstoke, Nicola, Castlegar and Alexis Creek, as well as upgrading partial crews at Vanderhoof and Houston to full 20 person crews.

*Eliminate Delays:*

**Recommendation #50**

**As a priority, The Forest Protection Branch should review the Danger Tree Assessment and Removal Process, as well as any other sources of delay, so that fire crews can be dispatched in a safe yet efficient manner to improve fire suppression effectiveness.**

*Implementation Status: Fully implemented*

- The MoF has worked with the WCB on streamlining the process required to carry out danger tree assessments and to expedite the removal of danger trees. New operational guidelines have been approved and were in place for the 2004 fire season.

*Pay for Volunteer Firefighter Training:*

**Recommendation #51**

**Training for volunteer firefighters should be funded by municipal and regional governments.**

*Implementation Status: Alternative Action*

- Since fire suppression is a protective service provided at the local government level, municipal and regional governments are responsible for financing the training of fire suppression personnel. However, the OFC is working with representatives of fire service associations and local jurisdictions to identify opportunities to support firefighter training programs. In addition, the OFC has partnered with the Justice Institute of British Columbia and Fire Chiefs' Association of British Columbia (FCABC) on an initiative to determine training requirements for volunteer fire fighters in BC.

*Treat Volunteers as Equals:*

**Recommendation #52**

**Volunteers must be treated as valued team members and fully informed of policies and expectations during emergency events.**

*Implementation Status: Substantially Implemented*

- Significant work has been completed based on recommendations from this review, as well as from debriefs and reviews held with Public Safety Lifeline volunteers, including emergency radio, emergency social services, and search and rescue. Enhancements implemented to date include: increased involvement of volunteer representatives in TEAMS training to provide information on volunteer capabilities and across learning opportunities, involvement of volunteers in

community seasonal preparedness workshops, and provision of ICS 100 training for all volunteers to increase knowledge of their roles during large emergencies. Specific to search and rescue, volunteers were involved with the RCMP in establishing protocols for evacuations, which clearly defines the major role of volunteers in such events and provides tools such as "Police Volunteer" vests to aid in recognition.

A Manager of Training and Volunteer Programs position has been established within PEP. This position solidifies linkages between Public Safety Lifeline volunteer disciplines as well as ensuring that the roles and capabilities of volunteers are clearly defined within all emergency management training, further strengthening volunteer involvement in local government planning and response. A full review of all PEP policies relating to Public Safety Lifeline volunteers is underway. Volunteers will be involved with this process to ensure policies provide clear and consistent direction.

In regards to career and volunteer firefighters, fire service personnel are treated equally under the reimbursement rate schedule.

*Involve First Nations:*

**Recommendation #53**

**The Ministry of Forests should explore ways to enhance the participation of First Nations in forest fire fighting and fuel load reduction activities.**

*Implementation Status: Substantially implemented*

- First Nations fire fighters currently make up over 50 per cent of the Protection Program's unit crews. The number of First Nations fire fighters was expanded with the addition of Type 1 unit crews (recommendation #49, Nicola and Alexis Creek). The MoF will work with First Nations communities to approach INAC for funding for hazard assessments and fuel management.

  The OFC is working with First Nations Emergency Services Society (FNESS) to encourage First Nation member Fire Departments to engage in interface fire suppression and prevention initiatives.

  PEP is also working with the Department of Indian and Northern Affairs Canada (INAC) and FNESS in the establishment of regional coordinator positions dedicated to First Nations emergency planning and for better integration of First Nations requirements into BC's emergency management system.

*Provide Better Maps:*

**Recommendation #54**

**The Ministry of Sustainable Resource Management should accelerate the completion of the major mapping initiative currently being undertaken to ensure it is available for use in future fire seasons.**

*Implementation Status: Substantially Implemented*

- MSRM, MoF, OFC, PEP and RCMP are working together to improve both the mapping database and the capacity to process and produce appropriate maps for use in evacuations.

  The working group identified urgent short-term requirements as well as long term solutions; best practices, multi-agency shared data and the use of electronic mapping for evacuations.

  The OFC has updated computer hardware and software to enhance mapping capabilities. The OFC has an agreement with Ministry of Sustainable Resources Management (MSRM) to supply mapping data and has purchased EmerGeo software to manipulate the Provincial Road Atlas.

  OFC staff has received extensive training in the operation of EmerGeo mapping software for evacuation. This resulted in a significant increase in effective and efficient use of maps for evacuations purposes during fire season 2004.

  Lessons learned from fire season 2003 were well applied by MSRM and provincial level emergency managers. MSRM, as was indicated by stakeholders during post operational debriefings following fall flooding 2003, the avian influenza outbreak in spring of 2004, and fire season 2004, provided outstanding pro-active service. Mapping during these events, anchored by MSRM, has improved significantly.

  PEP's Temporary Emergency Assignment Management System (TEAMS), has now been expanded to include regionally based MSRM staff to ensure that response times in support of PREOCs are maximized. These staff have just completed their first session of TEAMS training.

*Utilize Sprinklers:*

**Recommendation #55**

**Communities and homeowners in the interface should be encouraged to invest in methods of self-protection such as sprinklers as soon as possible.**

*Implementation Status: Alternative Action*

- The pilot sprinkler units provided by MoF to communities during the 2003 fire season proved very successful. OFC and MoF will work together on sprinkler system standards and training. Seed funding has been identified for two years to encourage local governments to prepare sprinkler systems and train for their use.

  The OFC provided a grant of 1 million dollars to the UBCM for the general purpose of providing and promoting best practices and the use of sprinkler systems for structural protection. The UBCM purchased three sprinkler protection units which were deployed for 69 days during the 2004 fire season. It is estimated that the sprinklers prevented the destruction of over 1 million dollars in structures during the 2004 fire season.

  Training was provided by the OFC in the use of the sprinkler protection units to fire fighters and contractors in Kamloops, Penticton and Cranbrook. Approximately 200 students participated in the 12 classes.

  The next phase of the UBCM Sprinkler Protection Program will encourage local communities and individuals to obtain their own sprinkler protection equipment.

  The OFC is working to develop a Best Practice for sprinkler deployment.

## *Part VII: FINANCIAL ACCOUNTABILITY*

### *Maintain Financial Accountability of Wildfire Response System:*

**Recommendation #56**

**Following each major fire season, the provincial government should undertake a program of audits to examine, from a value-for-money perspective, the effectiveness and economy of the financial administration systems used by the Provincial Emergency Program, The Office of the Fire Commissioner, and the Ministry of Forests, Forest Protection Branch.**

*Implementation Status: Substantially Implemented*

- The Emergency Vote, used by the Provincial Emergency Program, is audited annually by Treasury Board.

  At the end of each major fire season, MoF reviews fire operations including expenditures and effectiveness on selected large fires. The Office of the Comptroller General also conducts periodic audits of protection expenditures. Additionally, the MoF has developed a prototype Decision Performance Index (DPI) system that was tested after fire season 2004 to review value for money on large fires.

In addition to DPI, a strategic workload analysis has been initiated to optimize synergies between response facilities and support resources based on operational workload.

## *Part VIII: POST-EMERGENCY RECOVERY*

### *Prepare the Recovery Plan Before the Emergency:*

**Recommendation #57**

**Every emergency management plan should include a recovery committee composed of representatives from local government, volunteer and funding agencies, the Provincial Emergency Program, local clergy and affected residents.**

*Implementation Status: Substantially Implemented*

- The Emergency Program Management Committee has been established to identify recovery strategies for local governments. Guidelines and a local emergency plan template are in final stages. Once completed, these will address required actions for a comprehensive recovery from a disaster and provide the local governments with an emergency plan template which will include the identification of their local Recovery Committee comprised of all support agencies.

**Recommendation #58**

**For each natural disaster, a provincial "umbrella" committee with a designated lead agency should be established for the purpose of collecting donations and allocating awards.**

*Implementation Status: Fully Implemented*

- OVERBC (Organizations Volunteering for Emergency Recovery in British Columbia) is an umbrella organization of existing agencies which work together to help communities recover from a disaster by providing services such as first aid, safety education, volunteers, coordination, child care, rebuilding of homes, clean-up, in-kind donation management, provision of household goods, food management services, financial donations, advocacy and counselling services. The agencies of OVERBC work in partnership with the Provincial Emergency Program and the Emergency Social Services (ESS) Program of the Ministry of Human Resources. OVERBC seeks to ensure the availability of needed recovery services and to encourage uniform, impartial provision of these services. The regular member agencies are Adventist Development and Relief Agency, the Canadian Red Cross Society, Christian Reformed World Relief Committee, Liberty World Ministries, Mennonite Disaster Services, St. John Ambulance, the Salvation Army and the Society of St. Vincent de Paul—with affiliate member being the Emergency Social Services Association.

Relief agencies from OVERBC were involved in the 2003 Firestorm on donation management, the rebuilding of homes and awarding grants. In particular, the North Thompson Relief Fund received funding from some relief agencies and assisted in the collection of applicant information to determine how best to allocated these funds.

OVERBC has initiated a consent to release form that claimants must complete in order to share with other relief agencies. PEP also amended the Disaster Financial Assistance Intent to Claim form for future disasters, which includes a consent to release information to relief agencies and other governments in order to ensure that citizens can maximize all services/benefits/assistance being offered in the province during a particular disaster-related event and prevent an overlap/duplication of assistance.

*Deal With Watershed Restoration:*

**Recommendation #59**

**The provincial government, in partnership with local governments, should examine watershed restoration as soon as possible, to identify the areas of severe watershed destruction and develop a plan for the protection and rehabilitation of these areas.**

*Implementation Status: Substantially implemented*

- MoF, WLAP, and MOT worked together to rehabilitate lands burnt in 2003. Major rehabilitation activities included surface water control, reseeding of grasslands, and replacement fences to control cattle grazing activities. All areas affected by fire control actions during the 2003 fire season were identified and rehabilitation plans are in place with 90% of the work complete.

  Assessments of non-fire control burned areas were carried out. Notification of risk areas was provided to regional districts.

  The province, through PEP, is in discussions with the Federal government on post-fire mitigation after fires.

*Engage Federal Government in Funding Fire Prevention:*

**Recommendation #60**

**In the short term, the federal government should examine the possibility of developing a program on a cost-shared basis with provincial and local governments that invests in the fireproofing of interface communities. This investment in prevention will undoubtedly result in a reduction in future damage costs under the Disaster Financial Assistance Arrangements.**

*Implementation Status: Substantially implemented*

- MoF is co-leading, with Natural Resources Canada, a national effort to increase Federal support through a Canadian Wildland Fire Strategy. The plan provides significant opportunity for the federal government to support prevention, mitigation (including fuel management), response and recovery aspects of wildfire management to reduce Disaster Financial Assistance claims.

# Office of the Auditor General of British Columbia
# Managing Interface Fire Risks

## *Part II: ASSIGNING RESPONSIBILITIES*

**Recommendation #3**

**The Ministry of Forests should formalize in legislation its response priorities relating to the protection of human life, property and natural resources.**

*Implementation Status: Alternative Action*

The Wildlife Act, proposed to come into effect in 2005 states: The minister may establish policies and priorities for the efficient use of fire control resources of the government.

## *Part XIV: GATHERING AND REPORTING INFORMATION*

**Recommendation #22**

**The Interface Fire Committee should gather complete and reliable information about the nature and extent of the interface fire issue in the province and use the information to report on the management of the risks in communities with high or moderate risk associated with this hazard.**

*Implementation Status: Substantially implemented*

The Provincial Strategic Plan that is underway with local governments (see #1–Filmon's recommendation) will improve the information about the nature and extent of interface fire issues in the province. The OFC implemented a new fire reporting mechanism in Jan. 2004, MoF and the OFC will cooperate to develop prevention strategies based on additional information regarding interface fires. The information will be used to focus on fire prevention in the priority interface areas through fuel management.

# Appendices

# Appendix A

## *Timetable of Reports Issued and Public Accounts Committee Meetings on Managing Interface Fire Risks*

| | |
|---|---|
| *June 2001* | Office of the auditor General issued the *2001/2002 Report1: Managing Interface Fire Risks*. The report contains 37 recommendations. |
| *December 2001* | The Select Standing Committee on Public Accounts reviews the Auditor General's report. |
| *February 2002* | The Select Standing Committee on Public Accounts reports the result of its review to the Legislative Assembly in its First Report-Second Session 37th Parliament. |
| *November 2002* | Office of the Auditor General issues the first follow-up report to the Select Standing Committee on Public Accounts. |
| *November 2003* | Office of the Auditor General issues the second follow-up report to the Select Standing Committee on Public Accounts. |
| *November 2003 February 2004* | The Select Standing Committee on Public Accounts reviews the second follow-up report. |
| *May 2004* | The Select Standing Committee on Public Accounts reports that it has not completed the examination of the first follow up to the Legislative Assembly in its Second Report-Fourth Session 37th Parliament. |
| *May 2004* | The Select Standing Committee on Public Accounts reports the result of its review of the second follow up to the Legislative Assembly in its Second Report-Fourth Session 37th Parliament. |
| *April 2005* | Office of the Auditor General issues the third follow-up report including a review of the implementation of recommendations in the *Firestorm 2003 Provincial Review* to the Select Standing Committee on Public Accounts. |

# Appendix B

## *Table Comparing Similar Recommendations in the Two Reports*

| **OAG Outstanding Recommendation**<br>Source: Second Follow-up November 2003 | **Firestorm 2003 Recommendation**<br>Source: Firestorm 2003 Provincial Review |
|---|---|
| **Part II: Assigning Responsibilities**<br>3. The Ministry of Forests should formalize in legislation its response priorities relating to the protection of human life, property and natural resources. | No similar recommendation found. |
| **Part IV: Assessing the Risks**<br>8. The Ministry of Forests should complete hazard mapping of unorganized areas of the province over a reasonable time period, with emphasis on high and moderate risk areas. | 54. The Ministry of Sustainable Resource Management should accelerate the completion of the major mapping initiative currently being undertaken to ensure it is available for use in future fire seasons. |
| **Part V: Mitigating the Risks**<br>10. The Interface Fire Committee should encourage high and moderate risk communities to take practical steps to mitigate interface fire risks. | 1. The provincial government should lead the development of a strategic plan in cooperation with local governments to improve fire prevention in the interface through fuel management. The plan should:<br>a) Focus on identification of those areas of the province where communities, infrastructure, and watersheds have the greatest potential to be impacted by large-scale fires.<br>c) Require a community protection plan in those communities with a high probability and consequence of fire in the interface zone.<br>d) Be cost shared with local governments.<br>e) Give priority for funding, fire management planning, fuels mitigation, and protection to these areas. |
| **Part VI: Establishing Working Relationships Among Response Agencies**<br>12. The Office of the Fire Commissioner should work with communities to identify practical ways to improve public safety in populated areas of the province that lack fire department services. | 21. The province should adopt the principle of automatic aid to ensure that emergency services can be delivered in all areas of the province under the mandatory emergency plans. |

| **OAG Outstanding Recommendation**<br>Source: Second Follow-up November 2003 | **Firestorm 2003 Recommendation**<br>Source: Firestorm 2003 Provincial Review |
|---|---|
| **Part VIII: Planning Community Emergency Response**<br>14. The Provincial Emergency Program should develop a detailed implementation plan to provide support at the community level where assessments reveal emergency preparedness deficiencies. | 18. As is the case for municipal governments, regional districts should be required through legislation to provide local emergency plans developed to a provincial standard and maintained to a current status.<br>a) Local plans should be based on the British Columbia Emergency Response Management System (BCERMS).<br>b) Plans should be in a standardized format/ template consistent across the province, and be made consistent with provincial plans.<br>c) Plans should be developed from an "all hazards" perspective.<br>d) Plans must be practical, comprehensive and updated annually.<br>e) Plans must include mandatory mutual aid agreements among municipal and regional districts.<br>f) Plans must incorporate clear obligations and personal responsibilities of residents living in interface fire hazard areas.<br>g) Ideally, plans should include First Nations involvement.<br>h) Plans must have a communications element that incorporates local media into the disaster response effort. |
| **Part IX: Training Firefighters and Other Emergency Responders**<br>15. The Interface Fire Committee should work with communities to improve training of local firefighters. | 19. Provincial and local governments should ensure both forest firefighters and structural firefighters are cross trained in each other's area of competence. |
| **Part XIII: Recovering from Major Interface Fires**<br>21. The Provincial Emergency Program should develop guidelines and examples of recovery planning and make this material available to provincial communities. | 57. Every emergency management plan should include a recovery committee composed of representatives from local government, volunteer and funding agencies, the Provincial Emergency Program, local clergy and affected residents. |
| **Gathering and Reporting Information**<br>22. The Interface Fire Committee should gather complete and reliable information about the nature and extent of the interface fire issue in the province and use the information to report on the management of the risks in communities with high or moderate risk associated with this hazard. | No similar recommendation found. |

# Appendix C

## *Select Standing Committee on Public Accounts – Legislative Assembly of British Columbia: Guide to the Follow-Up Process*

### About the Committee

The Select Standing Committee on Public Accounts is an all-party select standing committee of the Legislative Assembly. The committee is currently composed of 14 members, including a Chair and Deputy Chair. The committee is supported in its work by the Office of the Clerk of Committees, which provides procedural advice, and administrative and research support.

The committee's Terms of Reference include, but are not limited to, the following powers:

- Consider all reports of the Auditor General which have been referred to the committee by the Legislative Assembly
- Sit during a period in which the House is adjourned or recessed
- Send for persons, papers and records
- Report to the House on its deliberations.

### Committee Meetings

Dates of committee meetings are posted on the Legislative Assembly web site at www.leg.bc.ca/cmt/. Committee proceedings are recorded and published in *Hansard*, which is available on the same web site.

The Auditor General and the Comptroller General are officials of the committee, and are usually present at committee meetings. During meetings, representatives of the Auditor General's office make a presentation of their audit findings.

Representatives of audited organizations also attend as witnesses before the committee, and provide information to the committee regarding actions taken to address the Auditor General's recommendations. Following each presentation, committee members are provided with the opportunity to ask questions of witnesses. Members of the Legislative Assembly may examine, in the same manner, witnesses, with the approval of the committee.

After initial consideration of a report, the committee often wishes to follow-up the progress made in implementing the Auditor General's recommendations, or recommendations made by the committee to the House, and adopted by the House. The procedures for follow-up reviews carried out by the Auditor General are outlined below.

## The Follow-up Process

1. About twelve months after an audited organization's appearance before the committee, representatives of the Auditor General's office will request representatives of the audited organization that a progress update be provided to the Office of the Auditor General within a period of time (usually one month).

2. Audited organizations must prepare a written response in the format noted below, and direct it to the Office of the Auditor General. In drafting the written response, organization representatives may wish to consult with the Office of the Comptroller General, and/or the Office of the Auditor General. As well, the Office of the Clerk of Committees would be pleased to answer any questions regarding the work of the committee, and committee procedure.

3. All written responses submitted by audited organizations are reviewed by the Office of the Auditor General to confirm the fairness of information about the progress made in implementing the recommendations contained in the Auditor General's report.

4. After completion of his review, the Auditor General issues a report to the Legislative Assembly, which includes the Auditor General's opinion on the status provided by the organization. The report is referred to the Select Standing Committee of Public Accounts.

5. Following review of the Auditor General's report, the committee may request that representatives of the audited organization appear before the committee to provide further information, or that further information be provided to the committee in written form.

6. The Office of the Comptroller General will arrange for witnesses to attend where the committee has asked for a presentation based on the written followup.

## Format of Written Responses

Written follow-up information prepared by audited organizations in response to a request from the Office of the Auditor General should include the following items:

- Date of the written response.
- A brief introduction to and summary of the topic being considered, including a reference to the period during which the audit was

conducted, date(s) the audit was considered by the Public Accounts Committee, and how many of the recommendations have been fully implemented, substantially implemented, partially implemented, alternative action taken and no action taken to date.

- A brief response to each recommendation made by the Auditor General and by the Public Accounts Committee (unless specifically advised to address only particular recommendations), including all actions taken to implement each recommendation.
- A work plan for implementation of the Auditor General's and the Public Accounts Committee's recommendations, including information on the means by which each recommendation will be implemented, time frames for implementation, identification of branches with primary responsibility for implementation, and procedures in place to monitor progress in implementing the recommendations.
- Any other information relevant to the Auditor General's or Public Accounts Committee's recommendations, including planned or current projects, studies, seminars, meetings, etc.
- Contact information for ministry/government organization representatives who have primary responsibility for responding to the Auditor General's and Public Accounts Committee's recommendations (name, title, branch, phone and fax numbers, e-mail address).
- The reports are to be signed by a senior official responsible for the area, normally a Deputy Minister, an Assistant Deputy Minister or Vice-President.
- Reports should be relatively brief (e.g. 5–10 pages), although attachments are acceptable. If guidance is needed in preparing the follow-up report, please contact any of the offices noted below.

## Contact Information:

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# Appendix D

## *Office of the Auditor General: Follow-up Objectives and Methodology*

### Purpose of Following Up Audits

The Office conducts follow-up reviews in order to provide the Legislative Assembly and the public with information on the progress being made by government organizations in implementing the recommendations arising from the original work.

Performance audits are undertaken to assess how government organizations have given attention to economy, efficiency and effectiveness.

The concept of performance audits is based on two principles. The first is that public business should be conducted in a way that makes the best possible use of public funds. The second is that people who conduct public business should be held accountable for the prudent and effective management of the resources entrusted to them.

### The Nature of Audit Follow-ups

A follow-up of an audit comprises:

1. requesting management to report the actions taken and to assess the extent to which recommendations identified in the original audit report have been implemented;
2. reviewing management's response to ascertain whether it presents fairly, in all significant respects, the progress being made in dealing with the recommendations;
3. determining if further action by management is required and, consequently, whether further follow-up work by the Office will be necessary in subsequent years; and
4. reporting to the Legislative Assembly and the public the responses of management and the results of our reviews of those responses.

While a follow-up of an audit focuses on progress made, it is not intended to assess whether or not the rate of progress has been satisfactory.

## The Nature of a Review

A review is distinguishable from an audit in that it provides a moderate rather than a high level of assurance. In our audits, we provide a high, though not absolute, level of assurance by designing procedures so that the risk of an inappropriate conclusion is reduced to a low level. These procedures include inspection, observation, enquiry, confirmation, analysis and discussion. Use of the term "high level of assurance" refers to the highest reasonable level of assurance auditors provide on a subject. Absolute assurance is not attainable since an audit involves such factors as the use of judgement, the use of testing, the inherent limitations of control and the fact that much of the evidence available to us is persuasive rather than conclusive.

In a review, we provide a moderate level of assurance by limiting procedures to enquiry, document review and discussion, so that the risk of an inappropriate conclusion is reduced to a moderate level and the evidence obtained enables us to conclude the matter is plausible in the circumstances.

## Scope of Audit Follow-ups

The follow-ups focus primarily on those recommendations that are agreed to by management at the time of the original audit or study. Where management does not accept our original recommendations, this is reported in managements' responses to the original audit reports. Since our reports are referred to the Legislative Assembly's Select Standing Committee on Public Accounts, management's concerns with our recommendations in some cases are discussed by the committee, which may also make recommendations for future action. If the committee endorses our recommendations, we include them in a follow-up. We also include any other recommendations made directly by the committee.

## Frequency of Reporting on Audit Follow-ups

We follow the process agreed to between the Office of the Auditor General, the Office of the Controller General and the Public Accounts Committee (Appendix A).

## Review Standards

We carry out our follow-up reviews in accordance with the standards for assurance engagements established by the Canadian Institute of Chartered Accountants.

## Methods of Obtaining Evidence

Our reviews involve primarily enquiry, document review and discussion.

Enquiry consists of seeking appropriate information of knowledgeable persons within or outside the entity being audited. Types of enquiries include formal written enquiries addressed to third parties and informal oral enquiries addressed to persons within the entity. Consistent responses from different sources provide an increased degree of assurance, especially when the sources that provide the information are independent of each other.

Document review consists of examining documents such as minutes of senior management meetings, management plans, and manuals and policy statements to support assertions made in management's written report.

Discussion consists primarily of interviews with key management and staff, as necessary, for further verification and explanation.

# Appendix E

## *Office of the Auditor General: 2005/2006 Reports Issued to Date*

Report 1 – April 2005

Follow-up of the Recommendations of the Select Standing Committee on Public Accounts contained in its Fourth Report of the 3rd Session of the 36th Parliament: Earthquake; Performance Audit

Report 2 – April 2005

Joint Follow-up of 2001/2002: Report 1 Managing Interface Fire Risks and Firestorm 2003 Provincial Review

This report and others are available on our website at http://www.bcauditor.com

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